BASIC SERIES 01
AVIATION

CH-47D ELECTRICAL SYSTEMS TRAINER

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The CH-47D Electrical System Trainer is designed to reflect the realistic production helicopter configuration of the electrical components. The use of minimal operational components integrated with trainer-peculiar simulated components provide aircraft realism for the effective training of maintenance personnel.

Functional Description:
The CH-47D Electrical System Trainer (EST) is a computer driven electrical systems training device capable of training 20 separate systems with 220 programmable faults. The trainer consists of four major components; Instructor's Console, Computer Equipment Cabinet, Airframe, and Power Source. To facilitate transportation with minimum effort, these are equipped with swiveled self-locking, rubber tired casters. Leveling screw jacks attached to the trainer base provide stability when it is positioned for use.

a. The Instructor's Console contains the primary electronic controls for the trainer, e.g. trainer control panel, hand-held terminal, CRT screen, computer keyboard, graphics controller, and power supplies. A cable interfaces the console to the Airframe.

b. The Computer Equipment Cabinet is connected to the Instructor's Console by two power cords and two data records. It houses the main computer, a Winchester disk drive, and a dual floppy disk drive.

c. The airframe is comprised of three sections: Section 1 simulates the cockpit and forward cabin area, Section 2 the cabinet, and Section 3 the aft cabin and ramp area. The Airframe is shortened to eliminate space that is unnecessary for the training mission and maximize the classroom space that is available.

d. Power to drive the trainer is converted from line-fed 208 vac 3-phase by the Trainer Power Supply. All trainer power is provided from this source, eliminating the requirement for a mechanically veri-drive unit to drive the generators. 24 vdc power requirements are met in the same manner.

Physical Information:
Instructors Console: 48" x 34" x 54"
Computer Equipment Cabinet: 23" x 31" x 70"
Airframe:
(Section 1): 108" x 126" x 139"
(Section 2): 60" x 168" x 111"
(Section 3): 72" x 168" x 154"
Power Source: 23" x 15" x 38"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

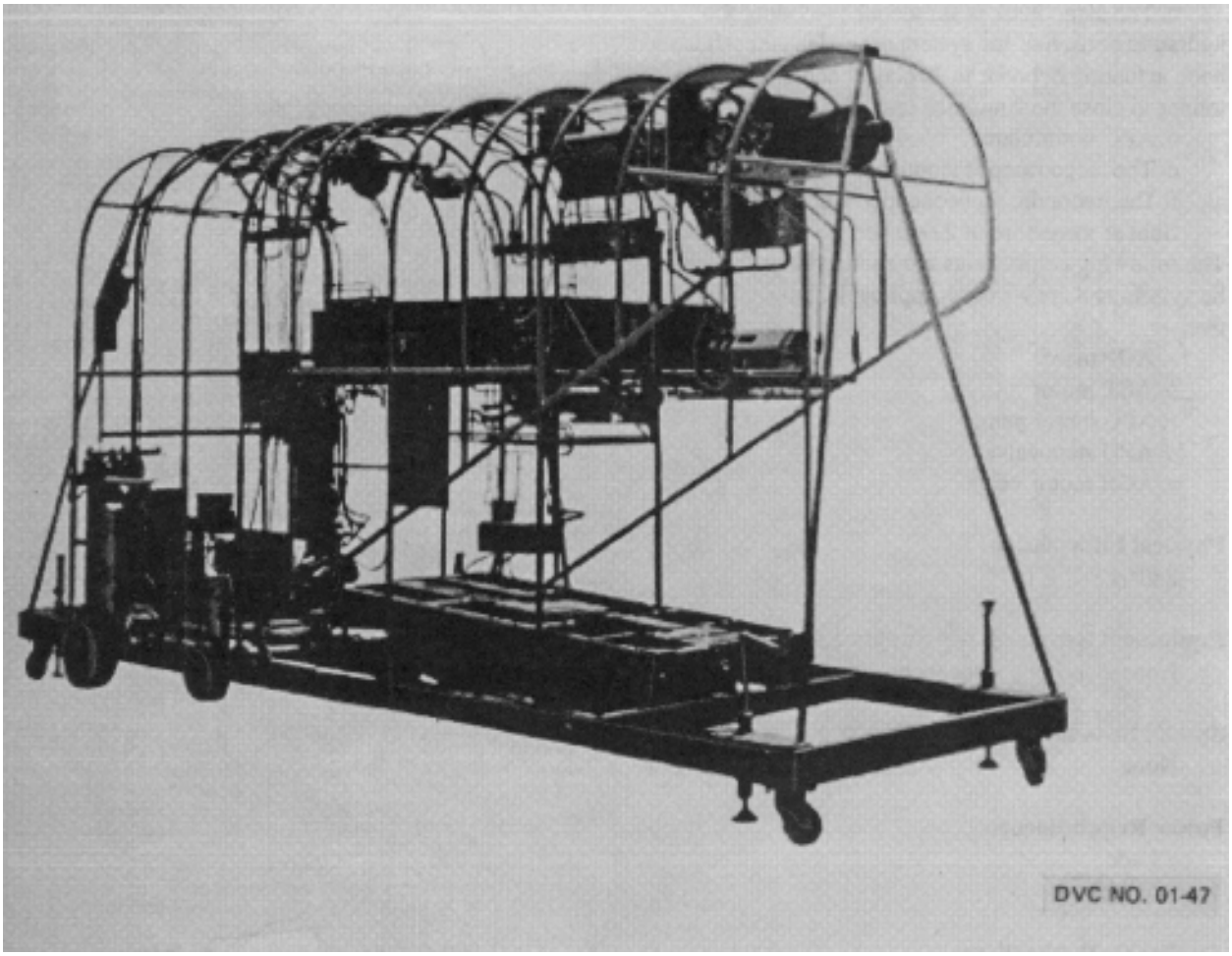
Power Requirements:
Facility: 208 vac, 75 A, 3-phase, 60 Hz

Applicable Publications:
TM 1-6910-708-14&P

Reference Publications:
TM 55-1520-227 Series

Training Requirements Supported:
MOSC 68F

CH-47 SERIES TUBULAR UTILITY HYDRAULIC SYSTEM TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to train and instruct operational and maintenance personnel on the CH-47 Series Helicopter, and to dynamically demonstrate the theory and operation of the tubular hydraulic system. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is of tubular frame construction, mounted on a base of steel members, with swivel casters and integral jacking provisions. Except for longitudinal and lateral foreshortening, the trainer has been designated full-scale as far as practicable. All components on the trainer are located as closely as possible to their respective positions on the representative aircraft except the winch control valves, which are mounted outboard of the winch in place of being inboard of the winch as on the aircraft. The cable-block assembly storage being under the winch control valves. Full operative aircraft components are used throughout as far as practicable. Operational characteristics differ in the following areas:

a. The hydraulic pressure transmitter is inoperative and a direct pressure reading is provided.

b. The hydraulic oil cooler fan motor is inoperative.

c. The cargo hook is simulated, providing the hydraulic portion of the system only. The aircraft cargo hook actuating cylinder is displayed and used on the trainer to close the simulated cargo hook.

d. APU is simulated.

e. The cargo ramp is simulated.

f. The hydraulic power supply is designed to deliver fluid at a pressure of 2,000 psi.

The following components are connected to the hydraulic system and are wired as applicable, but are inoperative:

aircraft components are used throughout as far as practicable. Operational characteristics differ in the following areas:

a. The hydraulic pressure transmitter is inoperative and a direct pressure reading is provided.

b. The hydraulic oil cooler fan motor is inoperative.

c. The cargo hook is simulated, providing the hydraulic portion of the system only. The aircraft cargo hook actuating cylinder is displayed and used on the trainer to close the simulated cargo hook.

d. APU is simulated.

e. The cargo ramp is simulated.

f. The hydraulic power supply is designed to deliver fluid at a pressure of 2,000 psi.

The following components are connected to the hydraulic system and are wired as applicable, but are inoperative:

a. AGP motor
b. AGP motor
c. APU motor pump
d. APU state valve
e. AGB motor valve

Physical Information:
240" x 90" x 117"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

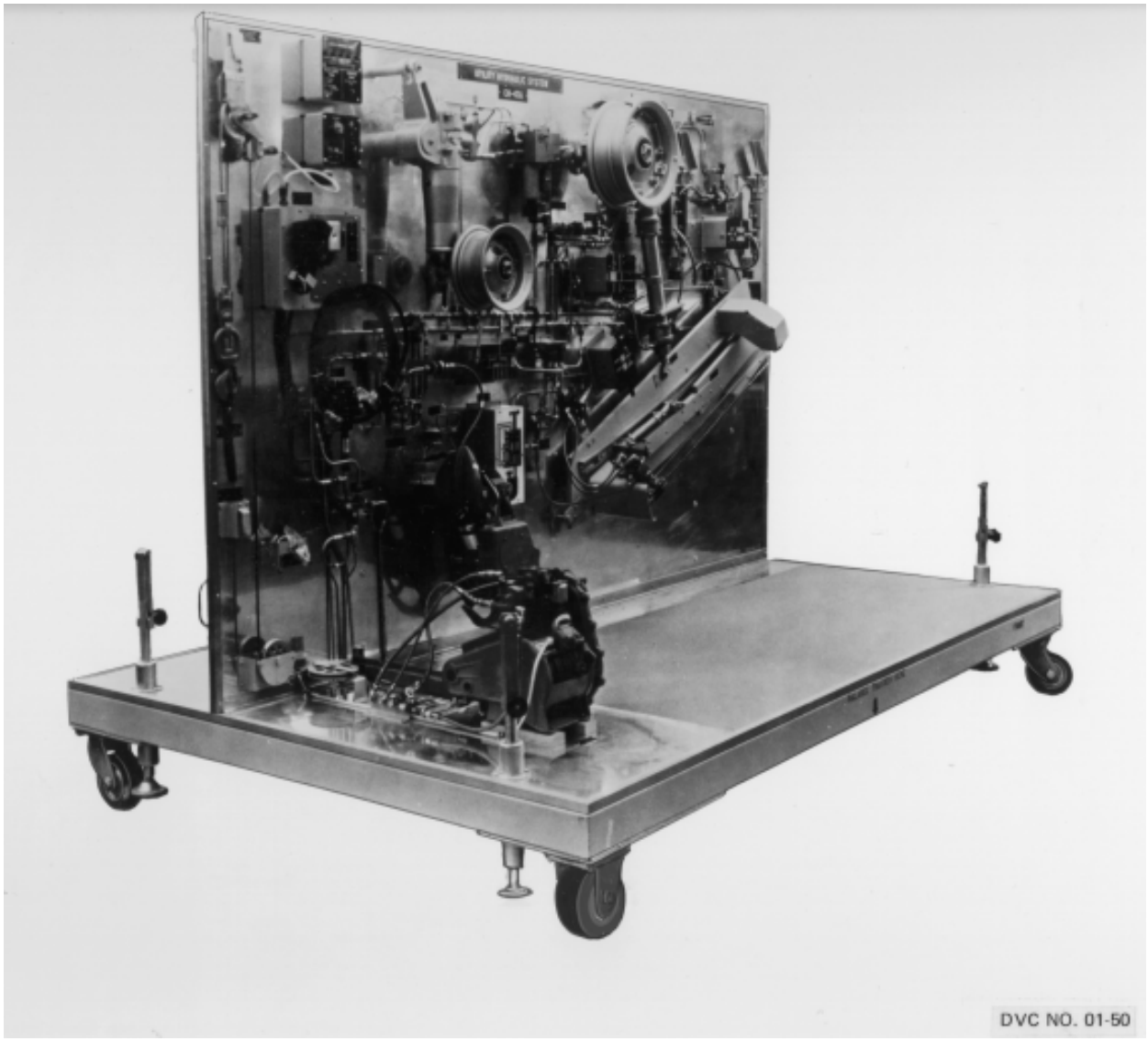
Power Requirements:
28 vdc
220/110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-209 Series

Training Requirements Supported:
SM 551-67U Task
1122 1125 1376

CH-47 SERIES HYDRAULIC BOARD TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training on the CH-47 Series Helicopter. The trainer provides a realistic environment for demonstrating the utility hydraulic system of the CH-47 Series Helicopter. The use of operational equipment and system simulation provides a comprehensive means of instructing installation, removal servicing adjustment, and troubleshooting procedures, The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a panel display, upon which are mounted standard CH-47 Helicopter hydraulic components, which are operational. Components are interconnected in the same relative positions as on the aircraft. The panel is mounted on a metal platform with the base of the platform on casters.

Physical Information:
72" x 96" x 72"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

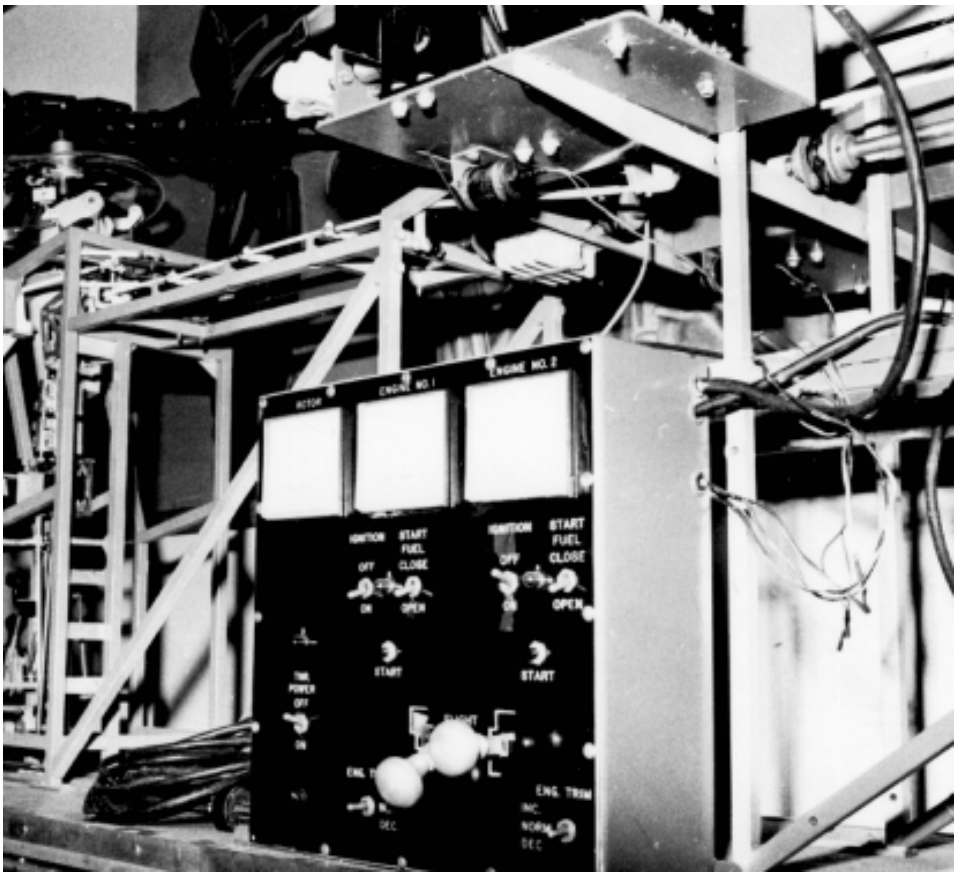
Power Requirements:
220 vac; 3-phase, 60 Hz
110 vac, 60 Hz

Applicable Publications:
Commercial manuals

Reference Publications:
TM 55-1520-209 Series

Training Requirements Supported:
SM 551-67U Tasks
1125 1127 1376

CH-47 FLIGHT CONTROL SYSTEM TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training on CH-47 Helicopter. The trainer provides a realistic environment for the instruction of maintenance personnel in the first and second stage mixing units of the CH-47 Flight Control System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is comprised of two units as follows:

a. Unit 1 consists of flight controls from the cockpit through the closet area and the forward, aft, rotor heads, and stub blades. All components, pushrods, activators, bell cranks, etc., are representative of the CH-47 Helicopter, though reduced in size. The structure is welded steel tubing mounted on an aluminum-framed base.

b. Unit 2 consists of a full-scale mockup of the first and second stage mixing units of the flight control system.

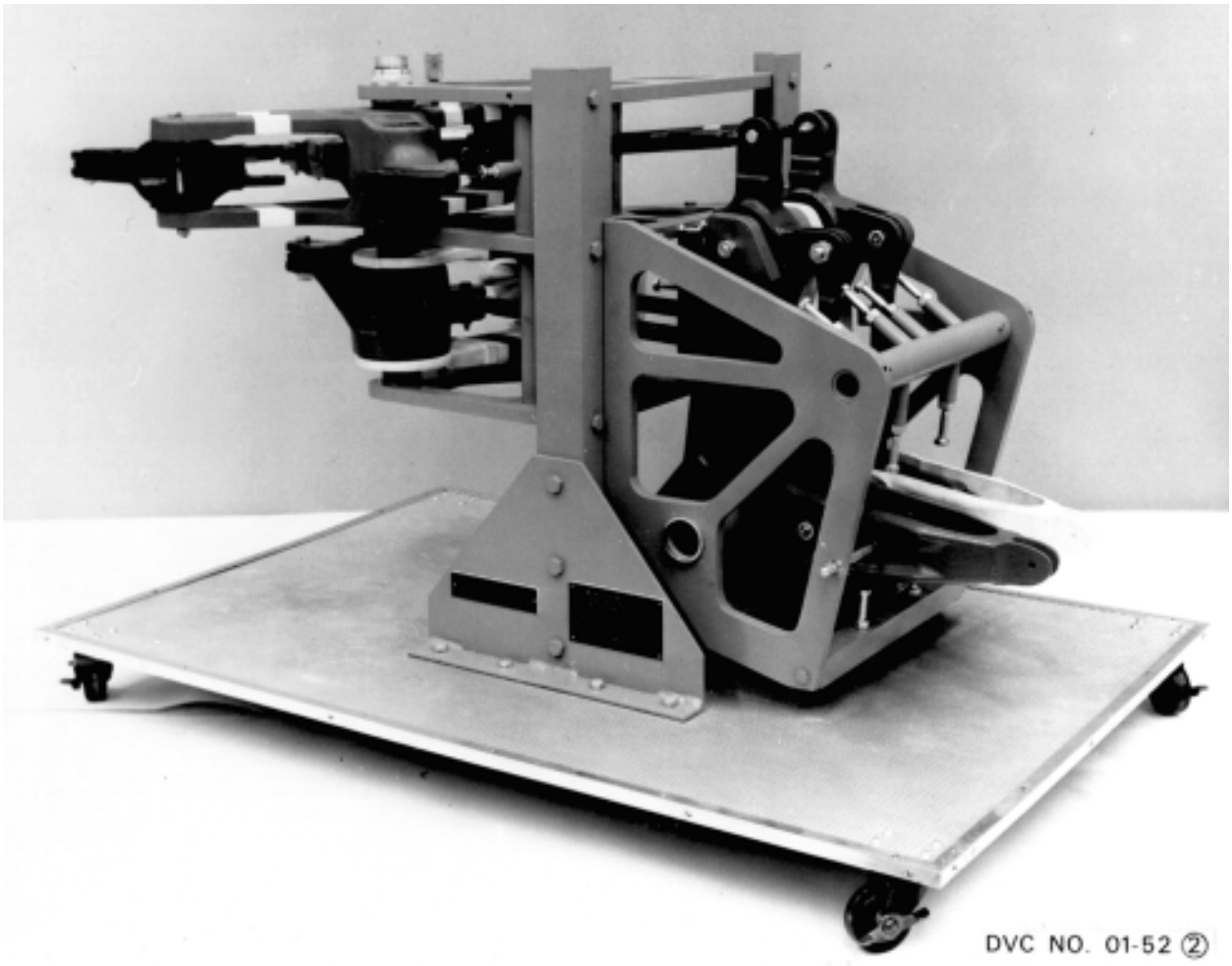
The mockup is fully operational for use in demonstrating the theory of operation and kinematics of the flight controls, mixing stages, and components.

Physical Information:
Unit 1: 26" x 62" x 41"
Unit 2: 40" x 40" x 30"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac



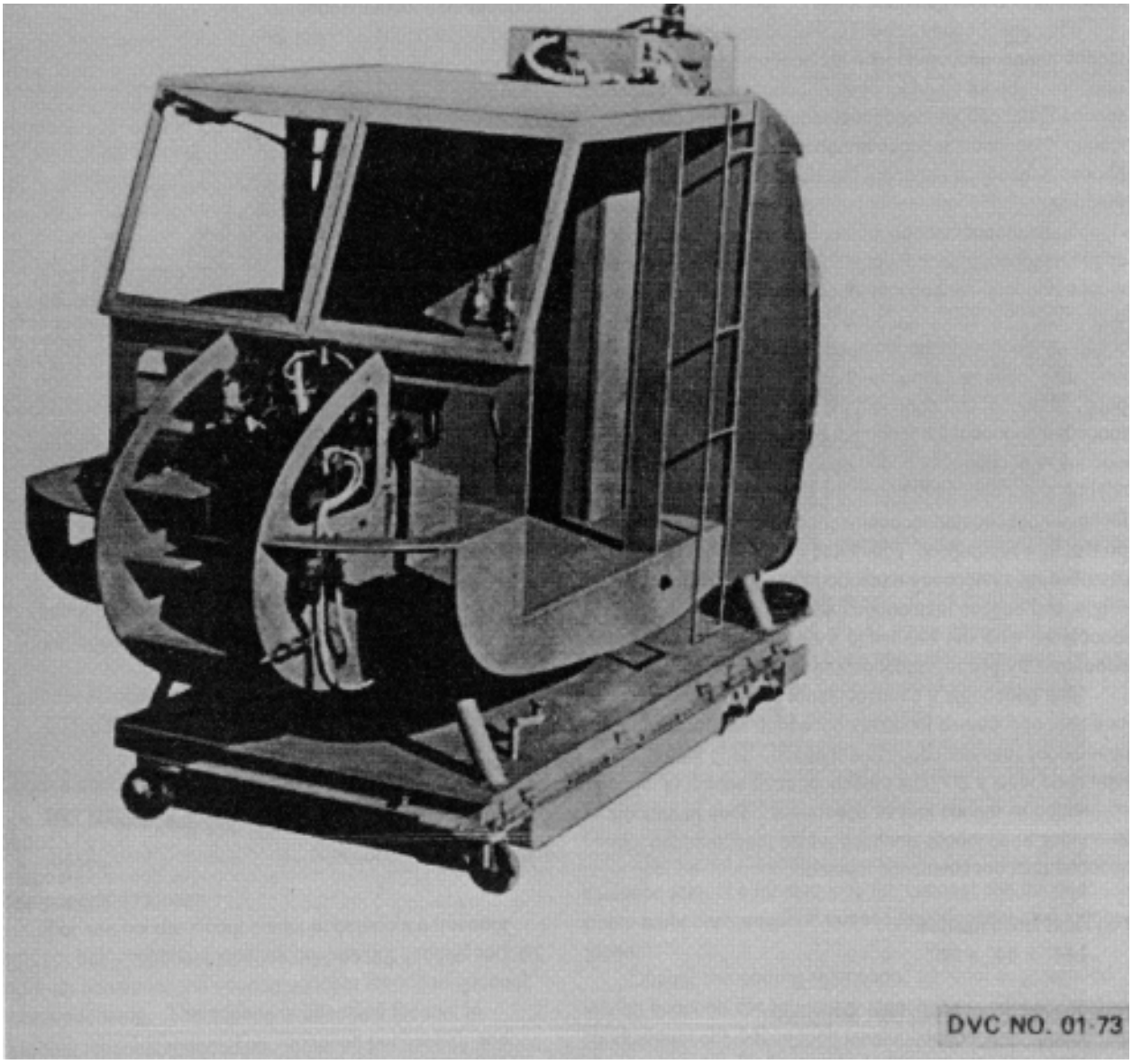
Applicable Publications:
None

Reference Publications:
TM 55-1520-209 Series

Training Requirements Supported:
SM 551-67U Tasks

1337	1373	2405	2407
1371	1376	2406	

UH-1H ELECTRICAL SYSTEM TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is used to demonstrate the functions of the Electrical System installed on the UH-1H Helicopter, and for classroom training in the support of maintenance inspection, electrical system troubleshooting, and safety precaution courses of instruction. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The base of the trainer is constructed of welded steel I-beams and covered with heavy plywood which is reinforced by an overlay of metal decking. Removable, swivel-type, rubber-tired casters are installed on the trainer base. Screw jacks are attached to the base frame for the purpose of securing the trainer in a static position.

A simulated cockpit of the UH-1H Helicopter is attached to the trainer base. The cockpit is equipped with a console, instrument and electrical panels, cyclic and collective sticks, and other helicopter electrical components. With the

exception of the generator drive unit, all electrical components are standard helicopter parts. Some of the components have been slightly modified to allow for induced malfunction, but normal operation of the units is unimpaired. All components wiring, switches, circuit breakers, and associated fixtures—are located in positions which approximate the production helicopter. Electrical components of the fuel distribution system are excluded from this trainer. Flight and engine instruments which are not directly associated with the Electrical System training are simulated by photographs on the instrument panel.

The Instructor's Control Panel contains the switches and circuit breakers by which malfunctions are introduced into the Electrical System. This panel is equipped with a 20-foot umbilical cord which is connected to the aft end of the trainer. This places the instructor at a remote position while malfunctions are induced into the Electrical System.

Physical Information:
144" x 84" x 96"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220 vac

Applicable Publications:
Commercial Handbook of Operating Procedures and Maintenance Instructions

Reference Publications:
TM 55-1520-210 Series

Training Requirements Supported:
SM 551-68F Tasks
1003 1061 1062 1063
1004

OH-58 SERIES COMPOSITE SYSTEMS TRAINER

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use, providing a realistic environment for instruction of aviation and maintenance personnel in the operation and maintenance of the OH-58A and OH-58C Helicopters. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of an actual OH-58A or OH-58C Helicopter airframe and skid gear. The main rotor blades are shortened, with one blade scarf-cut to show internal blade structure. The tail rotor blades are complete. An electric motor within the trainer is used to turn both the main and tail rotors at a slow rate. The shaft of the motor is provided with a torque limiter to ease starting loads and increase safety. The flight control system is complete with all sticks, linkage, and hydraulic aids. The helicopter-type hydraulic pump is non-operational, and its function is simulated by an electrically driven hydraulic power cart. The complete fuel and oil systems are included. The instrument panel is provided with a complete engine instrument cluster (less ammeter wiring) and caution warning lights. Other instruments and avionics panels are simulated by plastic-covered photographs. Fuel, oil, and hydraulic systems components, circuitry, and other electrical components and circuits at and above the work deck are provided. The tail rotor gear box and the transmission are not lubricated and are provided with clear plastic covers over cutaway sections.

The portable hydraulic power cart supplies hydraulic power to the trainer, simulating normal action of the engine-driven hydraulic pump.

Physical Information:
Trainer: 448" x 77" x 115"; 1,404 lb
Hydraulic power cart: 34" x 28" x 40"; 273 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 15 A, single-phase
220 vac, single-phase

Applicable Publications:
Handbook of Operating Instructions and Repair Parts

Reference Publications:
TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4	5-8-3	5-13-8	

ARTEP 17-205 Tasks

2-7-1	2-7-1	2-7-3	2-7-4

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5	5-E-2-E-6	5-F-2-F-1	5-H-2-H-4
5-E-2-E-2	5-E-2-E-7	5-F-2-F-2	5-L-2-L-1
5-E-2-E-3	5-E-2-E-8	5-F-2-F-3	
5-3-2-E-4	5-E-2-E-9	5-F-2-F-8	

ARTEP 55-167 Tasks

5-E-2	5-E-3	5-E-4	5-E-5

ARTEP 57-55 Tasks

5-8-A	5-10-D	7-11-B	7-13-B
5-8-D	7-8-G	7-11-E	7-13-B
5-10-A	7-11-A	7-13-A	7-14-I

MOSC 15-1D, 67V, and 100C

ATM TC 1-137 Tasks

1501	3501	4009	6502
1502	4005	6501	

SM 551-67V Tasks

1711	1719	2124	2259
1712	1720	2134	3004
1713	1721	2145	3157
1714	1722	2154	3173
1715	1723	2237	3174
1716	1724	2239	3175
1717	1725	2257	3176
1718	1726	2258	

OH-58A FUEL SYSTEMS PANEL TRAINER

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the OH-58A Helicopter Fuel Systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer displays the complete Fuel System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit the demonstration of the theory of systems operations and the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements. The display panel of the trainer shows the simulated helicopter controls and indicators relative to the Fuel System and a backlighted schematic of that system. The instructor's panel is installed within the left side of the trainer to conceal it from the student's view. There are controls on this panel which permit the instructor to insert specific conditions of normal or abnormal nature. The simulated helicopter panels and instruments on displays are depicted at twice their actual size. Colors on the helicopter panels and controls are the same as in the operational helicopter.

Physical Information:
100" x 32" x 71"; 550 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 15 A, 60 Hz

Applicable Publications:
Handbook of Operating Instructions and Repair Parts

Reference Publications:
TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4	5-8-3	5-13-8	

ARTEP 17-205 Tasks

2-7-1	2-7-2	2-7-3	2-7-4

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5	5-E-2-E-6	5-F-2-F-1	5-F-2-F-8
5-E-2-E-2	5-E-2-E-7	5-F-2-F-2	5-H-2-H-4
5-E-2-E-3	5-E-2-E-8	5-F-2-F-3	5-L-2-L-1
5-3-2-E-4	5-E-2-E-9		

ARTEP 55-167 Tasks

5-E-2	5-E-3	5-E-4	5-E-5

ARTEP 57-55 Tasks

5-8-A	5-10-D	7-11-B	7-13-B
5-8-D	7-8-G	7-11-E	7-13-E
5-10-A	7-11-A	7-13-A	7-14-1

MOSC 15-1D, 67V, and 100G

ATM TC 1-137 Tasks

1016	4009	6501	6502
1501			

SM 551-67V Tasks

1701	1717	1724	2124
1711	1718	1725	2214
1712	1719	1726	2215
1713	1720	1727	2262
1714	1721	2054	3235
1715	1722	2055	1716
1723	2056		

OH-58A ENGINE OIL SYSTEMS TRAINER

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the OH-58A Helicopter Oil Systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer displays the Oil System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit the demonstration of the theory of systems operation and the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements. The display panel shows the simulated helicopter controls and indicators and a backlighted schematic of the engine relative to the Oil Systems. Component representations within the schematic are depicted in the appropriate cross-sectional or external form and are animated by means of concealed motors or backlighting techniques, except where they are hand operated, then they are the same as on the helicopter. The Instructor's Control Panel is installed in the left side of the trainer to conceal it

from the student's view. By means of this panel, the instructor can insert specific conditions of normal or abnormal operation. The simulated helicopter panels and instruments on displays are depicted at twice their actual size. Colors on the panels and controls are the same as in the operational helicopter. The instrument representations are modified meter movements or motor-driven animations.

Physical Information:

100" x 32" x 93"; 550 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, 60 Hz

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 17-205 Tasks

2-7-1	2-7-2	2-7-3	2-7-4

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3	

ARTEP 55-89 Tasks

5-C-2-C-5	5-E-2-E-6	5-E-2-E-9	5-F-2-F-8
5-E-2-E-2	5-E-2-E-7	5-F-2-F-1	5-H-2-H-4
5-E-2-E-3	5-E-2-E-8	5-F-2-F-2	5-L-2-L-1
5-E-2-E-4			

ARTEP 55-167 Tasks

5-E-2	5-E-3	5-E-4	5-E-5

ARTEP 57-55 Tasks

5-5-4	5-8-3	5-13-8

MOSC 15-1D, 67V, and 100G

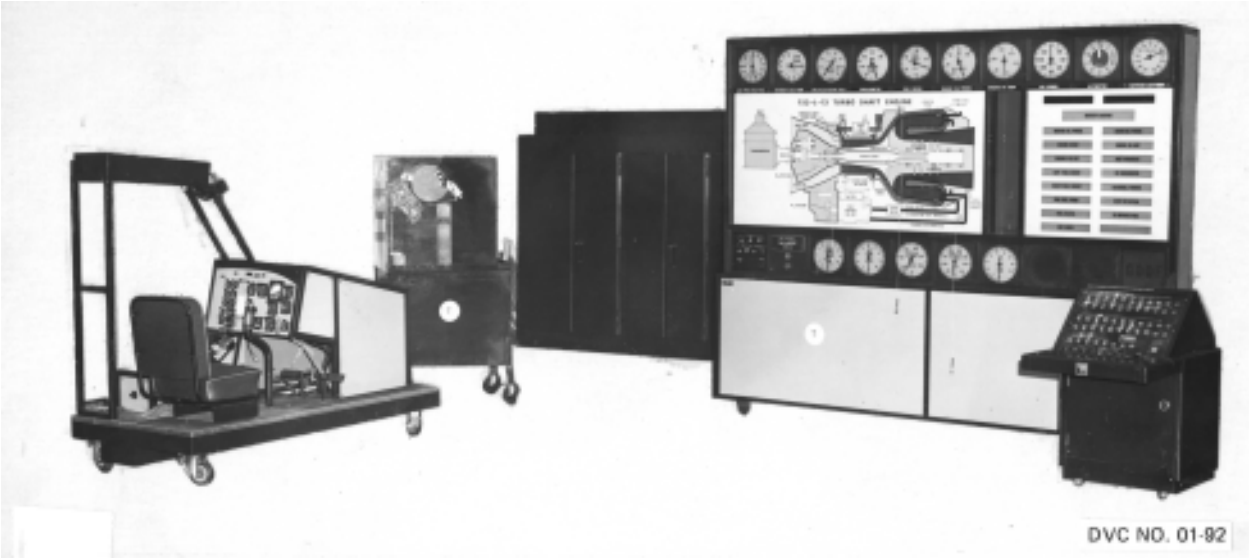
ATM TC 1-137 Tasks

1501	1503	4007	6501
1502	3501	4009	6502

SM 055-67V Tasks

1702	1716	1722	2055
1704	1717	1723	2056
1711	1718	1724	2120
1712	1719	1725	2237
1713	1720	1726	2277
1714	1721	2054	2278
1715			

UH-1H/T53-L-13 MULTI-PURPOSE ENGINE TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to dynamically demonstrate the internal functioning of the T53-L-13 engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The trainer provides aviator and maintenance personnel with basic and refresher training in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of a cockpit facsimile for the UH-1H Helicopter, an instructor station, and an analog computer.

The trainer utilizes dynamically animated and backlighted cross-sectional views of the engine, an analog computer, and facsimiles of the engine instruments and controls to demonstrate engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided which is a facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are functional and operable by the trainee and cause associated responses in the display panel. The device provides for training in various procedures such as correct engine starting and operation, the effect of various engine and fuel system malfunctions, and effect of operating parameters (temperature, airspeed, and altitude) on engine performance.

The instructor console contains switches and controls for injecting various inputs and malfunctions in the trainer. The effects resulting from such inputs are evident by visual observation of the engine display panel units. The sound system produces aural effects consistent with the operating condition being simulated.

Physical Information:
UH-1H cockpit station: 79" x 42" x 73"
Display panel: 126" x 36" x 75"
Computer: 112" x 35" x 79"
Instructor console: 41" x 29" x 45"
Fuel control and cabinet: 30" x 37" x 71"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Classroom, 456" x 420" x 120" high, with climatic control that maintains the ambient room temperature at 70 F, and a relative humidity of 60 percent or less is desirable.

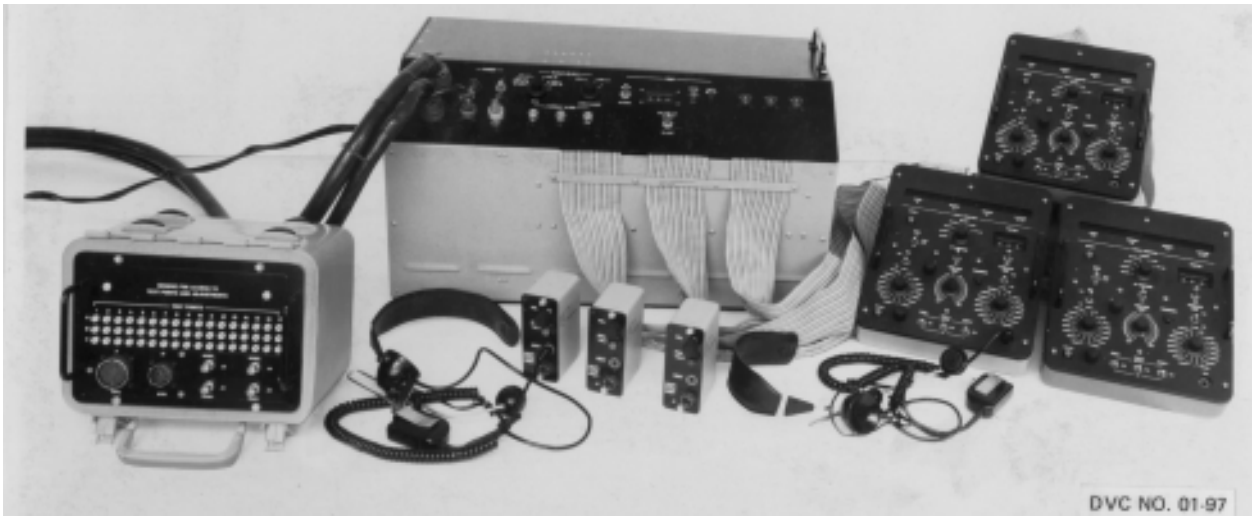
Power Requirements:
110/120 vac, 60 Hz

Applicable Publications:
NAVTRADEV P-3785, Operation and Maintenance Guide of UH-1H/T53-L-13 Multi-Purpose Engine Trainer, Device 2A27B-1

Reference Publications:
TM 55-2840-229 Series

Training Requirements Supported:
MOSC 67Y10, 68B

MOVING RADAR TARGET GENERATOR



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is the means to provide realistic training for air traffic controllers on site at operational airfields. Air traffic controllers maintain their proficiency in the techniques and procedures of air traffic control. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a master control box, a trainee station, three target control units, and a junction box. A realistic communication system is included in the trainer which enables radio communications between the radar station and each target control unit operator.

The trainer provides realistic synthetic radar targets which are inserted into operational Radar Sets AN/TPN-18 an AN/FPN-40. These targets can be inserted without interfering with the normal operation of the radar.

Four cases are provided for moving or storing the device.

Physical Information:
Control Module: 25" x 15" x 13"; 60 lb
Target control module: 10" x 12" x 5"; 5 lb
Junction box: 11" x 8" x 10"; 7 lb
Transit case no. 1: 34" x 22" x 19"; 120 lb
Transit case no. 2: 34" x 22" x 10"; 100 lb
Transit case no. 3: 10" x 22" x 14"; 40 lb
Transit case no. 4: 10" x 22" x 14"; 65 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Radar control site at an operational airfield

Power Requirements:
110 vac, 50/60/400 Hz

Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:
ARTEP 1-252 Tasks
5-9-3 5-14-3

ARTEP 57-55 Tasks

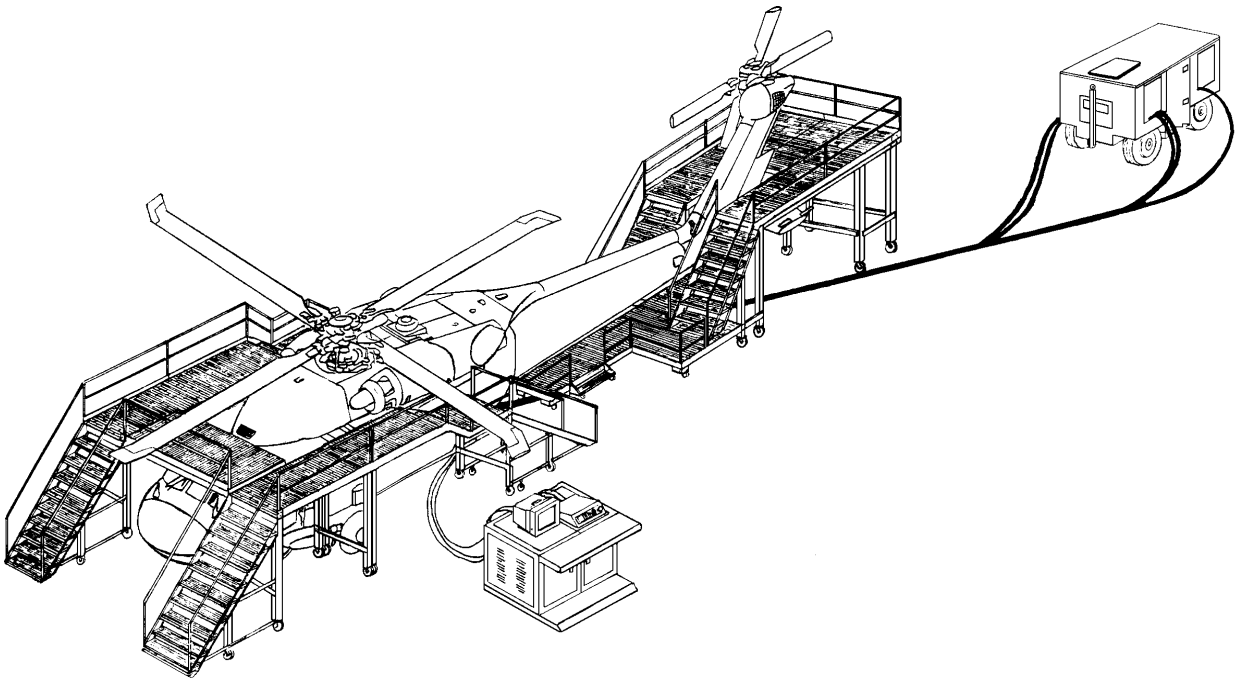
6-1-B	6-2-G	7-2-E	7-2-G
6-2-E	6-2-H	7-2-F	7-2-H
6-2-F	7-1-D		

MOSC 15-3J, 93J, and 103AY

SM 011-93J Tasks

1015	1026	1035	1051
1016	1027	1036	1052
1017	1028	1037	1053
1018	1029	1038	1054
1020	1030	1039	2001
1021	1031	1040	2002
1022	1032	1041	2004
1023	1033	1044	2005
1024	1034	1045	2006
1025			

BLACK HAWK MAINTENANCE TRAINER (BHMT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Black Hawk Maintenance Trainer (BHMT) is used by instructor personnel to provide both individual and group training in maintaining the UH-60A/L model helicopters. The BHMT is designed to teach maintenance personnel trouble-shooting techniques, provide hands-on training in the removal and replacement of components/equipment, and preflight and operational checks.

Functional Description:
Device 01-107 is installed in a single-room training facility with sufficient room to complete all training tasks.

The trainee station includes a full-size replica of a UH-60A or UH-60L Black Hawk helicopter. The BHMT components are located in the same relationship as in the UH-60A/L helicopter. Cockpit controls operate realistically to provide simulated performance of aircraft systems.

All equipment functions, operations, responses, and interfaces are identical to those of the baseline UH-60A/L counterparts during normal maintenance operations, including the interaction between them.

The avionics system has Inter-Cabin Communication capability only.

The trainer is designed to provide an accurate representation of the performance characteristics of the UH-60 helicopter during normal operating, emergency, and malfunctioning conditions by providing the widest range of task simulation, performance requirements, and realistic cues required for detection of malfunctions.

The automatic computer controlled mode of operation is capable of demonstrating the appropriate sights, sounds, and sequencing results during normal start-up and operating procedures.

The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select and initiate the training mode. Basic operating modes include training, demonstration, and maintenance.

Physical Information:
Trainee station including maintenance platform: 16' 10" H x 16' 5" W x 61' 9" L

Power Cart: 63" H x 60" W x 105" L

Instructor Operator Station: 44.47" H x 52.12" W x 27.5" D

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Minimum installation area required: 1000 square feet
Temperature range: 28 C
Relative humidity: 0-90%

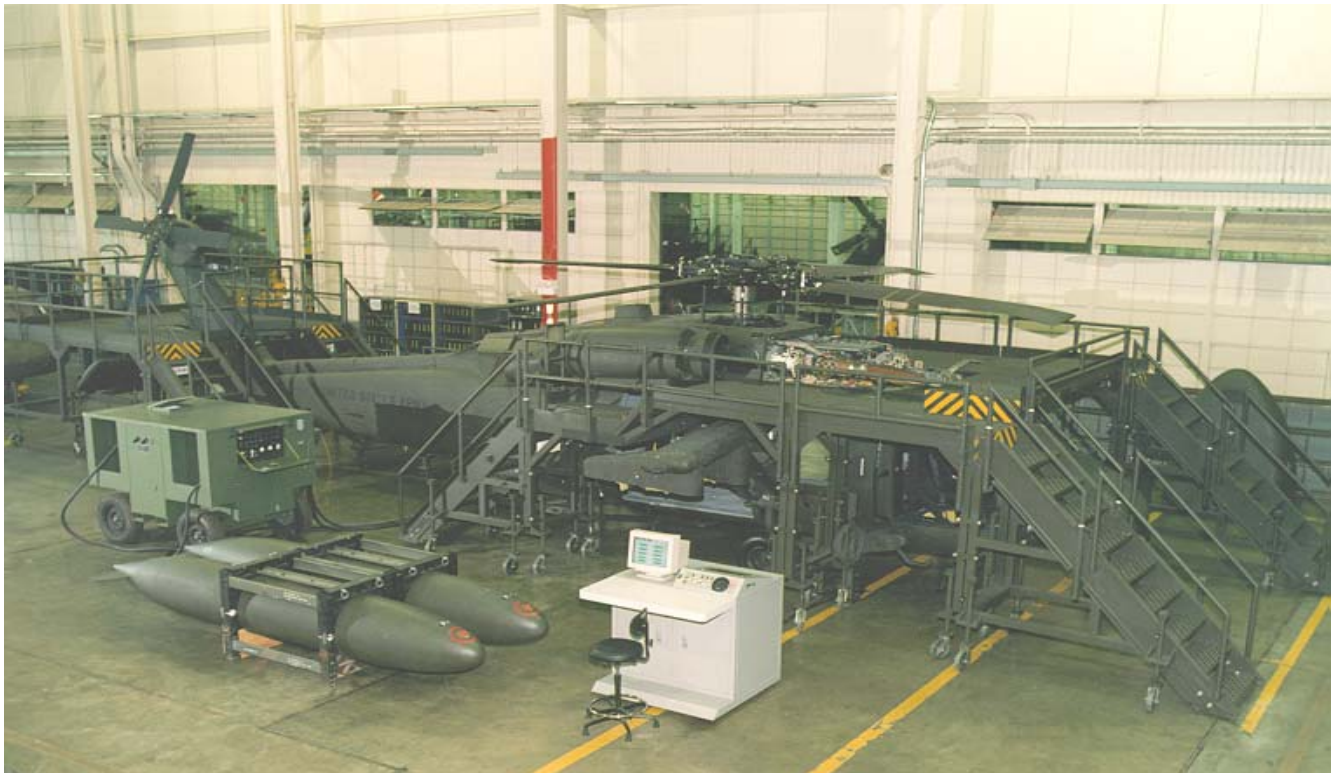
Power Requirements:
120/208 Vac, 60 Hz, 3 phase

Applicable Publications:
TD 1-6930-706-10 Operators Manual
TD 1-6930-706-20 Maintenance Manual to include RPSTL

Reference Publications:
TM 1-1520-237 series

Training Requirements Supported:
(Information not available)

BLACK HAWK MAINTENANCE TRAINER (BHMT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Black Hawk Maintenance Trainer (BHMT) is used by instructor personnel to provide both individual and group training in maintaining the UH-60L model helicopters. The BHMT is designed to teach maintenance personnel trouble-shooting techniques, provide hands-on training in the removal and replacement of components/equipment, and preflight and operational checks.

Functional Description:
Device 01-107 is installed in a single-room training facility with sufficient room to complete all training tasks.

The trainee station includes a full-size replica of a UH-60L Black Hawk helicopter. The BHMT components are located in the same relationship as in the UH-60L helicopter. Cockpit controls operate realistically to provide simulated performance of aircraft systems.

All equipment functions, operations, responses, and interfaces are identical to those of the baseline UH-60L counterparts during normal maintenance operations, including the interaction between them.

The avionics system has Inter-Cabin Communication capability only.

The trainer is designed to provide an accurate representation of the performance characteristics of the UH-60 helicopter during normal operating, emergency, and malfunctioning conditions by providing the widest range of task simulation, performance requirements, and realistic cues required for detection of malfunctions.

The automatic computer controlled mode of operation is capable of demonstrating the appropriate sights, sounds, and sequencing results during normal start-up and operating procedures.

The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select and initiate the training mode. Basic operating modes include training, demonstration, and maintenance.

Physical Information:
Trainee station including maintenance platform: 16' 10" H x 16' 5" W x 61' 9" L
Power Cart: 63" H x 60" W x 105" L
Instructor Operator Station: 44.47" H x 52.12" W x 27.5" D

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Minimum installation area required: 1000 square feet
Temperature range: 28 C
Relative humidity: 0-90%

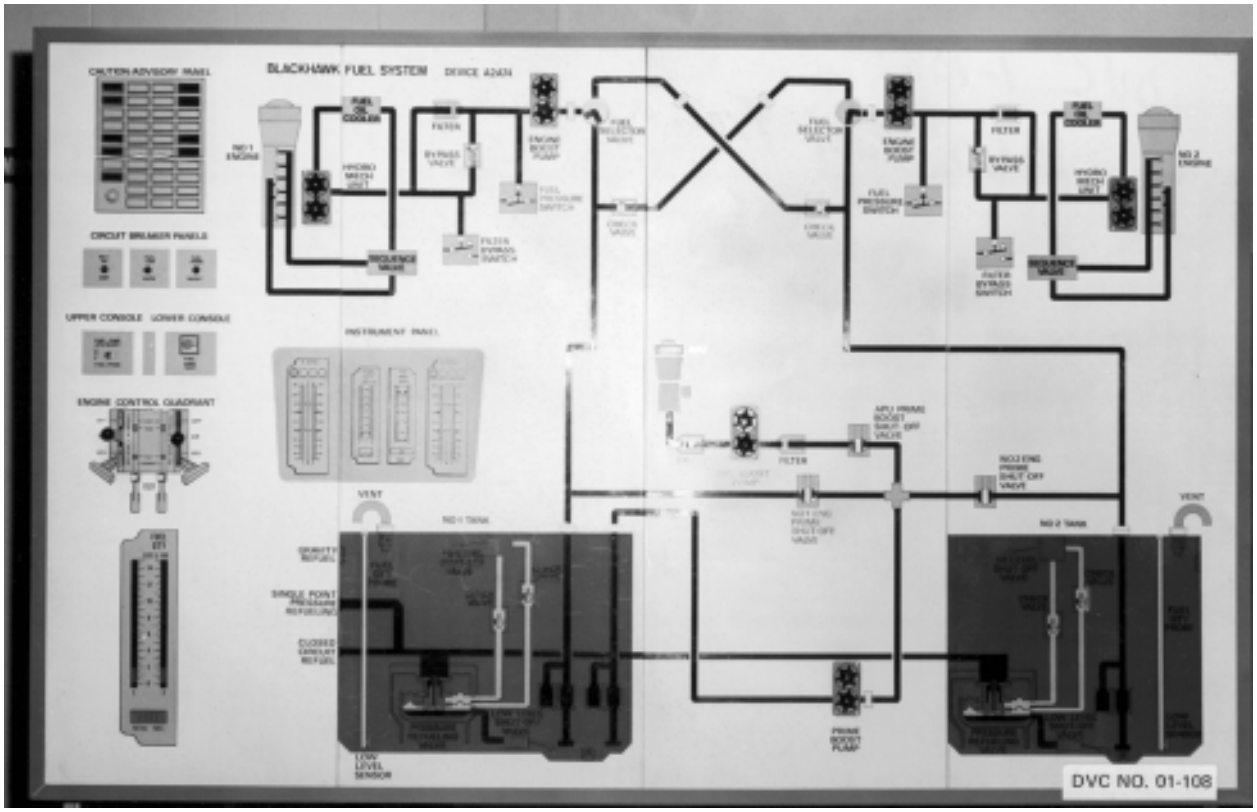
Power Requirements:
120/208 Vac, 60 Hz, 3 phase

Applicable Publications:
TD 1-6930-706-10 Operators Manual
TD 1-6930-706-20 Maintenance Manual to include RPSTL

Reference Publications:
TM 1-1520-237 series

Training Requirements Supported:
(Information not available)

BLACK HAWK FUEL TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use in the support of maintenance training for aircrews on the UH-60 Helicopter. It provides a realistic environment for presenting the Fuel System components of the production aircraft. The use of operational equipment and system simulation offers a comprehensive means of instructing installation, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer displays the complete Fuel System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls; backlighted schematic; and built-in electrical logic which will permit demonstration of the theory of system operations, isolating malfunctions, and making proper adjustments or replacements. The instructor's panel permits the instructor to insert specific conditions of normal or abnormal nature.

Physical Information:
72" x 120" x 24"; 650 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 Hz

Applicable Publications:
NAVTRADEV P-4487

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-284 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3	5-11-5	5-11-6	5-12-3
5-11-4			

ARTEP 17-205 Tasks

1-10-2	2-7-1	2-7-2	2-7-3
2-5-1			

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3	

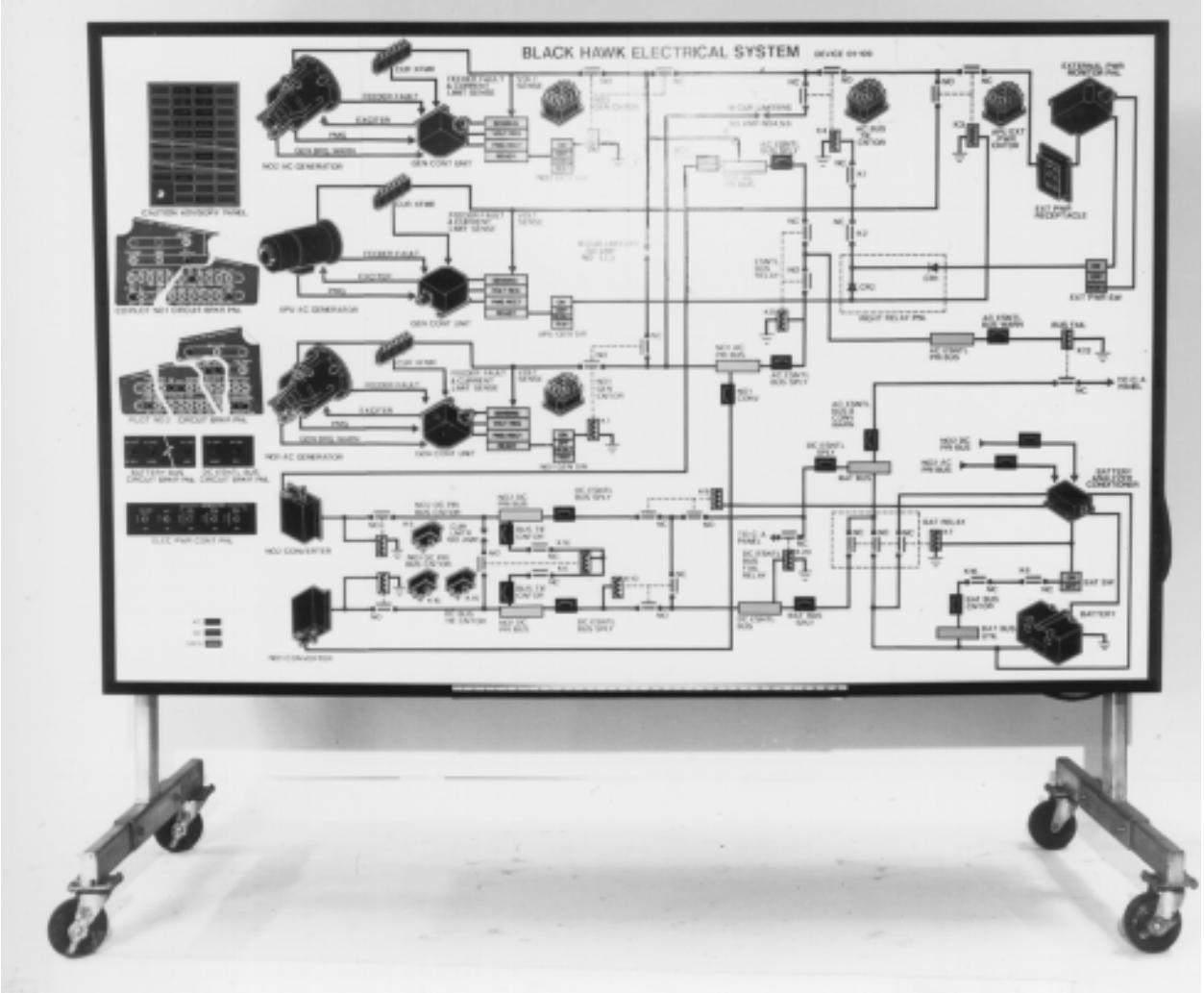
ARTEP 57-55 Tasks

5-8-A	7-1-B	7-8-A	7-13-A
5-10-A	7-1-D	7-11-A	5-14-I
6-1-D	7-3-C	7-11-G	

MOSC 15-1N and 100 ATM Tasks

1502	4007	4009	6501
1503	4008	4040	

BLACK HAWK ELECTRICAL SYSTEM PANEL TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for use issue (limited production).

Purpose of Trainer:
The trainer is for classroom training, providing a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the UH-60 Electrical Systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The Electrical Systems Trainer displays the Electrical Systems in animated, sectionalized, pictorial, and back lighted form. It provides the instructor with the controls, back-lighted schematic, and built-in electrical logic, which will permit demonstration of the theory of systems operation; and with the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements.

Physical Information:
Panel: 60" x 24" x 24"
Console: 52" x 29" x 63"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 Hz

Applicable Publications:
NAVTRADEV P-4489

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3	5-11-5	5-11-6	5-12-3
5-11-4			

ARTEP 17-205 Tasks

1-10-2	2-71	2-7-2	2-7-3
2-5-1			

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3	

ARTEP 57-55 Tasks

5-8-A	7-1-B	7-8-A	7-13-A
5-10-A	7-1-D	7-11-A	7-14-I
6-1-D	7-3-C	7-11-G	

MOSC 15-1N and 100

ATM Tasks

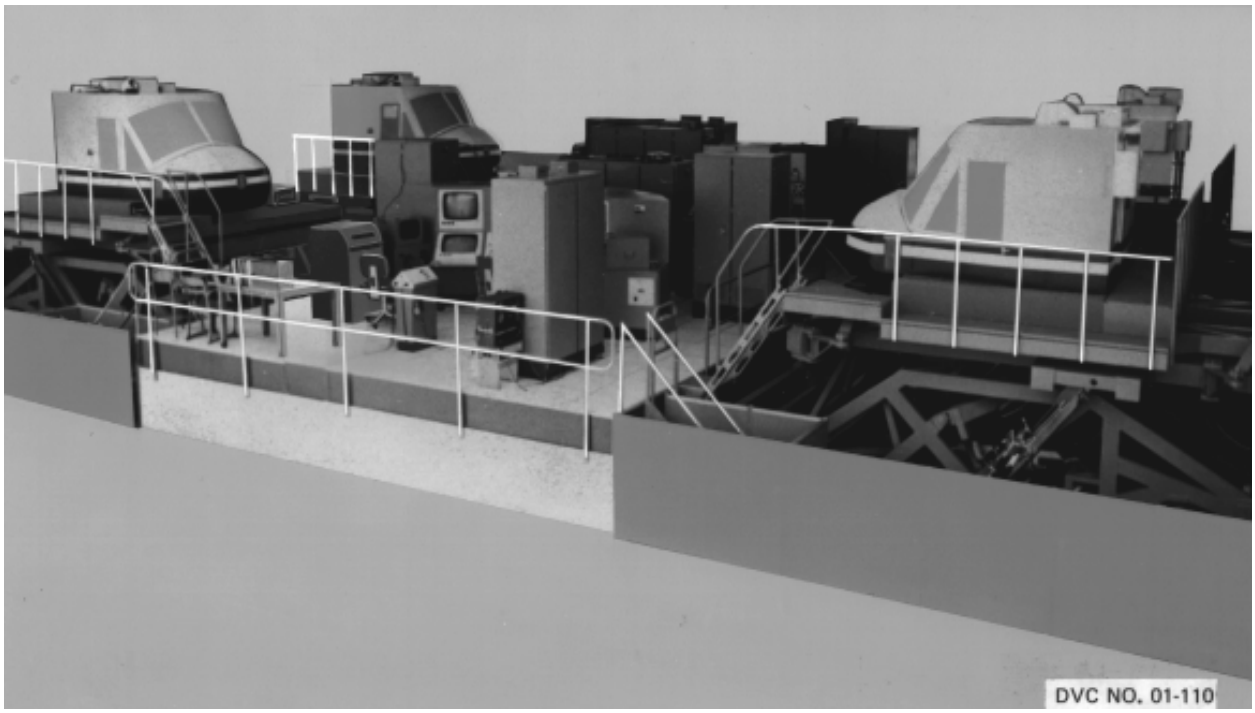
1501	1503	4005	4010
1502	3501	4406	6501

SM 551-68F Tasks

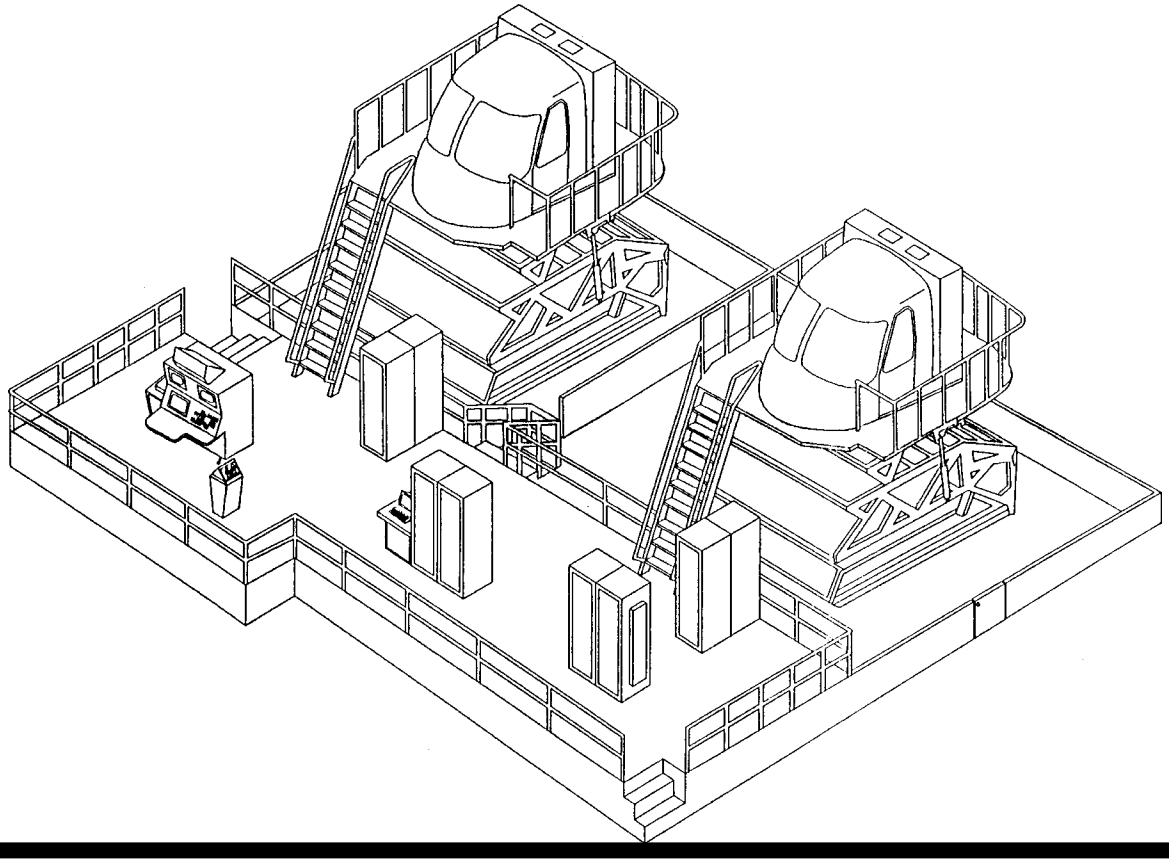
1003	1067	2005	2086

UH-1H SYNTHETIC FLIGHT TRAINER SYSTEM

4 Cockpit Configuration



2 Cockpit Configuration



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide training in the techniques of instrument flight in a helicopter and to aid in maintaining proficiency in those techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, instrument flying techniques, and radio navigation for rotary-wing aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer may be comprised of either two or four simulated UH-1H cockpits mounted on motion platforms, with 5 degrees of freedom to provide motion cues, a digital computation system, and an instructor station. A sound system is included to provide complete aural cues. All training functions for each cockpit can be controlled by the device operator through the computer complex. Reliability and ease of maintenance are incorporated into the device through use of the modular construction concept. Under this concept, individual modules perform the computation, instruction, simulation (student cockpit), and the cockpit motion functions.

The digital computers used in this training device are programmed to perform many of the repetitive operations traditionally assigned to the human instructor. The instructor is now able to supervise simultaneously the training of as many as four students, each flying a different mission, since he is relieved of those tedious aspects of his job. While this changes the traditional one-to-one student-instructor ratio, the instructor retains the ability to override the computer and work individually with any student who needs his assistance. This multistudent capability is made possible by a feature called the automatic training mode. In this mode, precorded briefings and instructions prepare the student for his lesson. If a demonstration is necessary, computer programs activate the motion base and appropriate cockpit displays, thus enabling the instructor to explain difficult flight maneuvers to students in either real time or slow time.

Physical Information:

2 Cockpit configuration
Trainer: 393" x 480" x 240"
Hydaulic pump unit: 240" x 144" x 120"

4 Cockpit configuration
Trainer: 750" x 480" x 240"
Hydaulic pump unit: 480" x 144" x 120"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
A climatically controlled building that maintains an ambient room temperature at 70 F, and a relative humidity of 50% is desirable.

Power Requirements:

2 Cockpit configuration
Trainer: 277/480 vac, 3-phase, 4 wire, 130 kva, 15 kva
Hydraulic pump unit: 208/480 vac, 3-phase, 4 wire, 52 kva, 104 kva

4 Cockpit configuration
Trainer: 277/480 vac, 3-phase, 4 wire, 258 kva, 30 kva
Hydraulic pump unit: 208/480 vac, 3-phase, 4 wire, 52 kva, 208 kva

Applicable Publications:
TM 55-6930-207 Series

Reference Publications:
TM 55-1520-210 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-4-4	5-8-4	5-12-3	5-12-4

ARTEP 1-167 Tasks

E-2	E-11	E-13	E-16
E-3			

ARTEP 1-55 Tasks

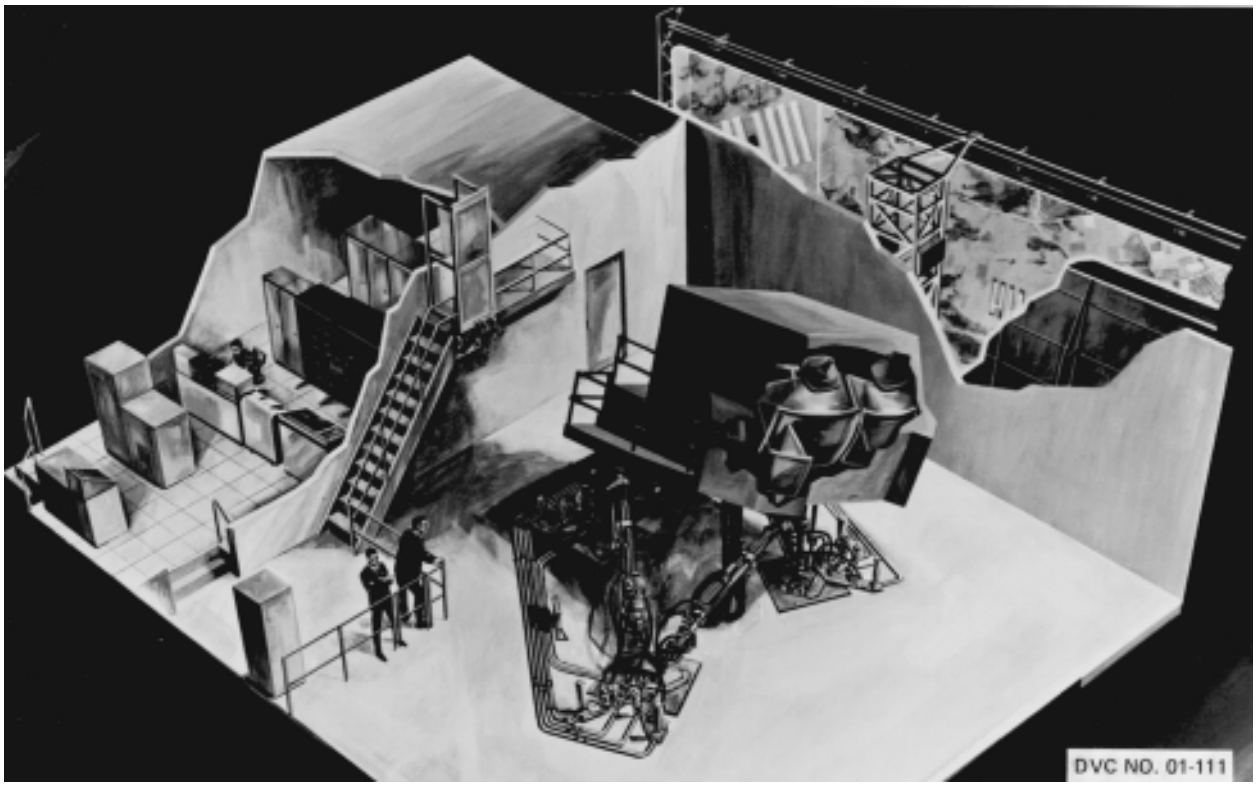
5-E-1	5-9-F	7-6-D	7-12-H
5-5-D	5-9-H	7-8-D	7-12-L
5-9-C	7-4-F	7-12-E	7-14-B

MOSC 15-1E and 100B

ATM TC 1-211 Tasks

1000	1002	1003	1004
1023	1053	1068	1075
1076	1077	1078	1079
1080	1081	1082	1083
1099			

CH-47 FLIGHT SIMULATOR



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide training in the techniques of visual and instrument flight in the CH-47 Helicopter and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, visual flying techniques, instrument flying techniques, and radio navigation for the CH-47D Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of one simulated CH-47D Helicopter cockpit mounted on a 6-degree freedom of motion system. The system is controlled by a Harris Nighthawk computer. A Digital Image Generator system provides identical high resolution displays out the front and side windows for the pilot and copilot trainee stations. A computer generated checkerboard display is presented through the chin windows to provide height above ground and relative motion information. As instructor station is located in the cockpit behind the trainer stations.

Physical Information:
Cockpit area: 192" x 192" x 216"
Computer room: 360" x 240" x 120"
Hydraulic area: 144" x 120" x 126"
Visual: 960" x 480" x 372"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Climatically controlled building that maintains an ambient room temperature at 70 F, and a relative humidity of 50 percent is desirable.

Power Requirements:
Cockpit and Visual: 120/280 vac, 3-phase, 4 wire, 60 Hz
Hydraulic: 277/480 vac, 3-phase, 4 wire, 60 Hz

Applicable Publications:
TM 55-6930-212 Series

Reference Publications:

TM 55-1520-240 Series

Training Requirements Supported:

ARTEP 55-167 Tasks

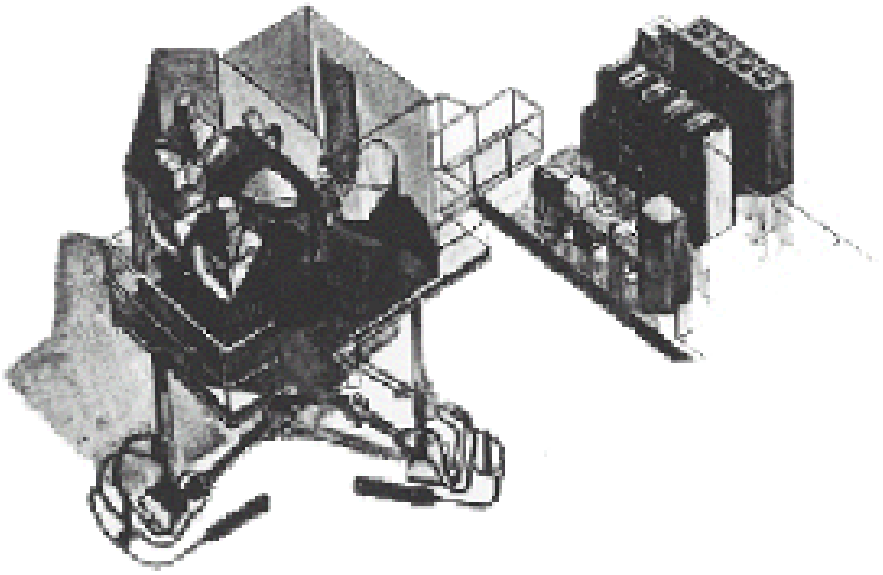
C-5	D-4	D-7	D-11
D-1	D-6	D-8	

MOSC 15-1G and 100C

ATM TC 1-216 Tasks

1000	1025	1075	1098	2078	2901
1001	1026	1076	1099	2079	2903
1002	1027	1077	2004	2080	2905
1007	1028	1078	2005	2081	2922
1015	1029	1079	2008	2084	2934
1016	1053	1080	2009	2086	2936
1017	1060	1081	2016	2087	2967
1018	1061	1082	2039	2090	2970
1022	1068	1083	2072	2091	
				2076	

BLACK HAWK FLIGHT SIMULATOR



Training Category/Level Utilized:
Aviation Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide training in the techniques of day/night visual and instrument flight in the UH-60 Helicopter, and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, emergency procedures, day/night visual and instrument flying techniques for the UH-60 type of aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The Black Hawk Flight Simulator consists of a simulator compartment containing a cockpit Pilot/Copilot station, an instructor/operator station (IOS) and an observer station, mounted on a six-degree-freedom-of-motion platform. The simulator is equipped with a visual system that simulates natural helicopter environment surroundings and a central computer system that controls the operation of the simulator complex. Automated training and performance measurement techniques provide for standard instruction and objective evaluations.

Physical Information:
Cockpit area: 480" x 516" x 324" H
Computer area: 480" x 360" x 120" H
Hydraulic area: 144" x 192" x 120" H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Climatically controlled building that maintains an ambient temperature at 75 F, and a relative humidity of 50 percent is desirable.

Power Requirements:
Trainer and light bank: 120/208 vac, 3-phase, 4 wire, 60 Hz
Hydraulic pump: 277/480 vac, 3-phase, 4 wire, 60 Hz

Applicable Publications:
TM 55-6930-215 Series

Reference Publications:
TM 55-1526-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-4-4	5-8-4	5-12-3	5-12-4

ARTEP 17-205 Tasks

1-15-2	1-15-4	3-8-2	3-8-3
1-15-3	2-1-4		

ARTEP 55-89 Tasks

5-1-2	5-1-3	5-1-4

ARTEP 57-55 Tasks

5-1-E	5-9-F	7-6-D	7-12-H
5-5-D	5-9-H	7-8-D	7-12-L
5-9-C	7-4-E	7-12-E	7-14-B

MOSC 15-1N and 100

ATM TC 1-212 Tasks

1000	1029	1079	2005	2091
1001	1032	1080	2008	2096
1002	1051	1081	2009	2099
1007	1052	1082	2016	2214
1014	1053	1083	2044	2401
1015	1060	1084	2072	2402
1016	1062	1095	2078	2435
1017	1063	1135	2079	2436
1018	1068	1136	2081	2451
1023	1075	1137	2083	2452
1025	1076	1146	2086	2469
1026	1077	1150	2087	
1028	1078	2001	2090	

BLACK HAWK ELECTRICAL SYSTEMS TRAINER (CLASSROOM)

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstrate the functions of the Electrical System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The electrical trainer displays the operation of the ac and dc electrical and electronic systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Malfunctions include, but are not limited to open circuits in ac and dc systems, over voltage relay inoperative, inverter failure, loss of main generator, emergency bus relay inoperative, improper voltage output for ac and dc systems, and APU inoperative.

Physical Information:
Panel: 40" x 76" x 6"
Console: 28" x 28" x 64"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

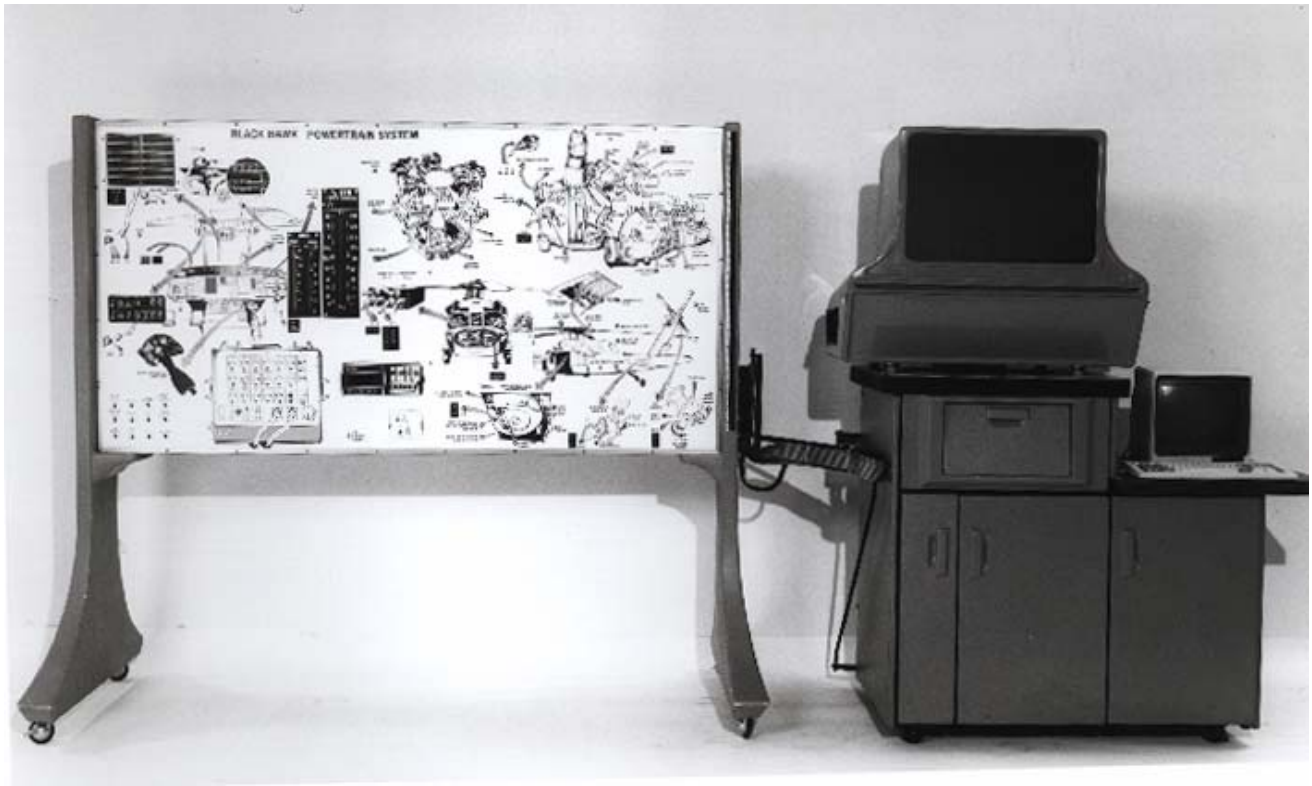
Applicable Publications:
TD 55-6910-712-14&P

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
SM 551-68F Tasks

1003	1004	1019	2005
2007	2135		

BLACKHAWK POWER TRAIN SYSTEMS TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstrate the functions of the Power Train System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Power Train System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The power train trainer displays the operation of the power train systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Physical Information:
Panel: 40" x 76" x 6"
Console: 28" x 28" x 64"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
TD 55-6910-713

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
(Information not available.)

BLACK HAWK ELECTRICAL SYSTEMS TRAINER (INDIVIDUAL)

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for individual training, to demonstrate the functions of the Electrical System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The electrical trainer displays the operation of the ac and dc electrical and electronic systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Malfunctions include, but are not limited to, open circuits in ac and dc systems, over voltage relay inoperative, inverter failure, loss of main generator, emergency bus relay inoperative, improper voltage output for ac and dc systems, and APU inoperative.

Physical Information:
Panel: 28" x 48" x 10"
Console: 76" x 29" x 29"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

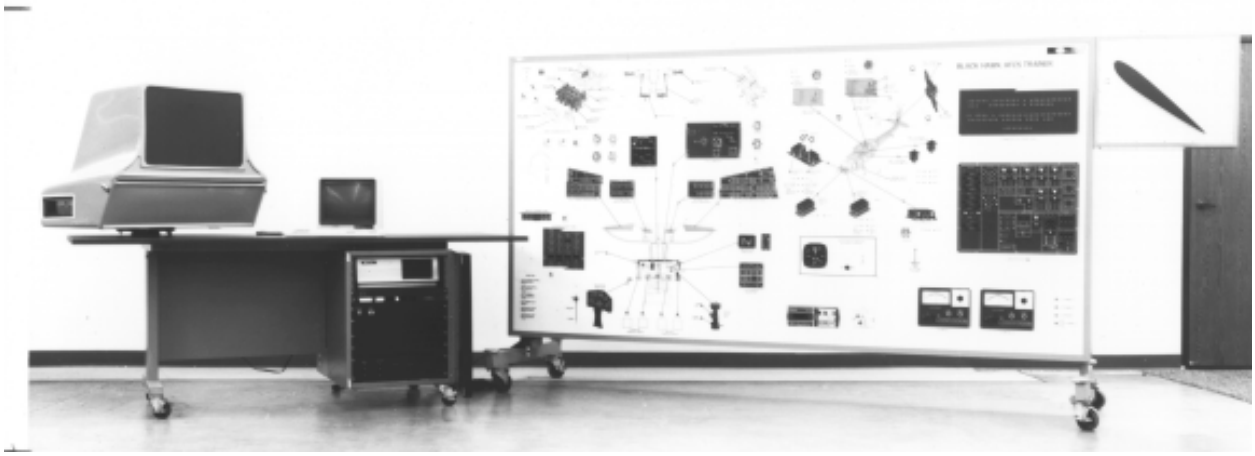
Applicable Publications:
TD 55-6910-715-14&P

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
SM 551-68F Tasks

1003	1019	2005	2086
1004	1067	2007	2135

UH-60L BLACK HAWK AUTOMATIC FLIGHT CONTROL SYSTEM TRAINER (CLASSROOM)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstrate the functions of the automatic flight control system on the UH-60 Helicopter.

Functional Description:
The training device is required to provide realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks, and to adjust and troubleshoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:
The AFCS Trainer consists of an open architecture design using a Personal Computer platform networked to form a cluster of 12 Student Stations supported by one Instructor Operator Station.

Equipment Required, Not Supplied:
3.5"/1.44MB formatted diskette (minium 12 per Student Station)

Special Installation Requirements:
None

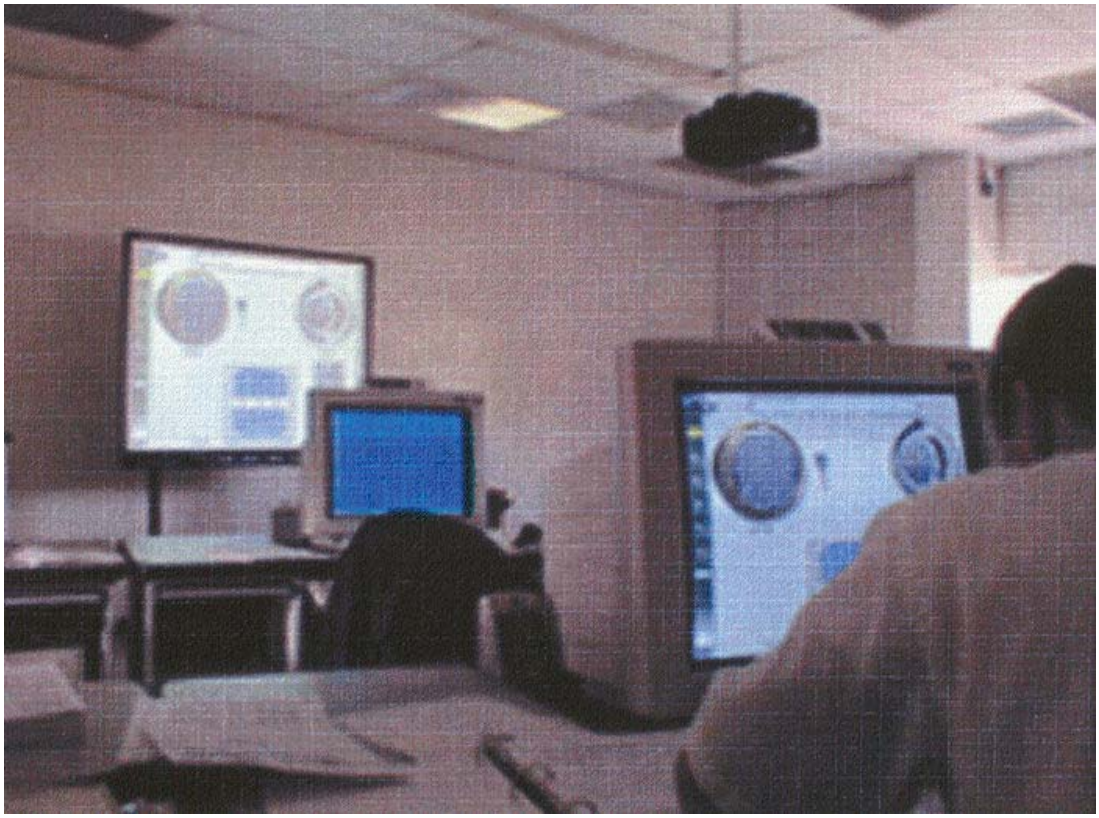
Power Requirements:
110 vac

Applicable Publications:
TD 55-6910-719-14&P

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
MOSC 35K20

UH-60L BLACK HAWK AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) TRAINER (INDIVIDUAL)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstrate the functions of the automatic flight control system on the UH-60 Helicopter.

Functional Description:
The training device is required to provide a realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks, and to adjust and trouble shoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:
The AFCS Trainer consists of an open architecture design using a Personal Computer platform networked to form a cluster of 12 Student Stations supported by one Instructor Operator Station.

Equipment Required, Not Supplied:
3.5"/1.44MB formatted diskette (minium 12 per Student Station)

Special Installation Requirements:
None

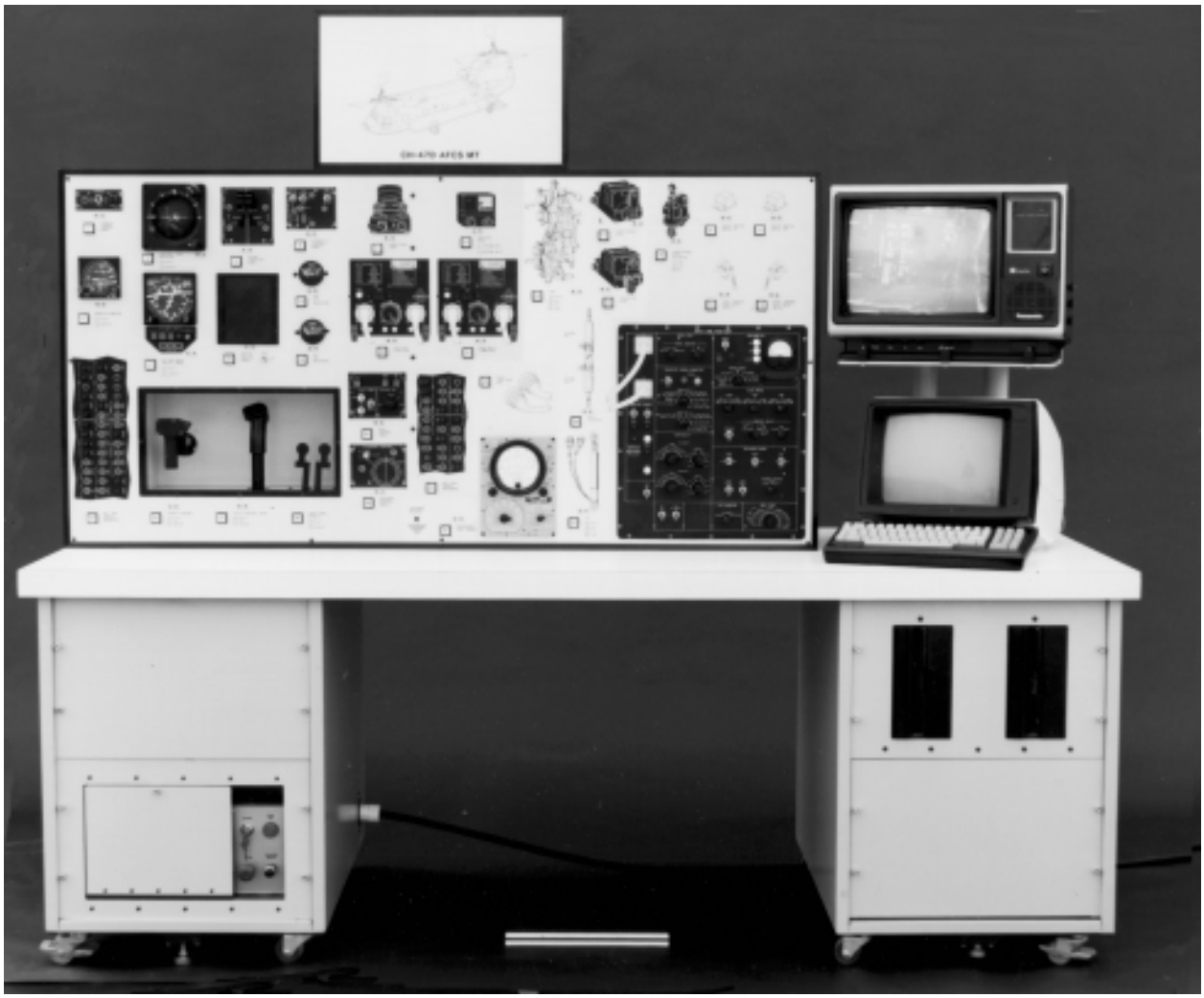
Power Requirements:
110 vac

Applicable Publications:
TD 55-6910-718-10

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
MOSC 35K20

CH-47D HELICOPTER AVIONICS MAINTENANCE TRAINER (CLASSROOM)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used to teach avionics mechanics to perform operational checks, adjustments, and trouble shooting the subassemblies and components of the CH-47D Advanced Flight Control System.

Functional Description:
This device uses visual display techniques to replicate the CH-47D Advanced Flight Control System and Operational Test Equipment. The use of panel program control enables the operator/student to visually inspect components or subsystems, make pressure or electrical readings, and take corrective actions to return the simulated system to normal operation after insertion of a malfunction by the instructor.

The operations described are accomplished through the use of software system modeling, microprocessor control, state-of-the-art LSI circuit based on logic cards and video presentations controlled by the simulation control processor through a video disk-based television monitor display system.

The Avionics Maintenance Trainer (Classroom) consists of the following major assemblies:

a. Display Panel
b. Console
c. Video Disk-Based TV Display System
d. CRT Terminal
e. Frame Structure
f. Protective Cover

The trainer is built to allow viewing from classroom distances. It may also be adjusted in height. The trainer is portable and has lockable casters.

Physical Information:
82.5" H x 96" W x 18.5" thick

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

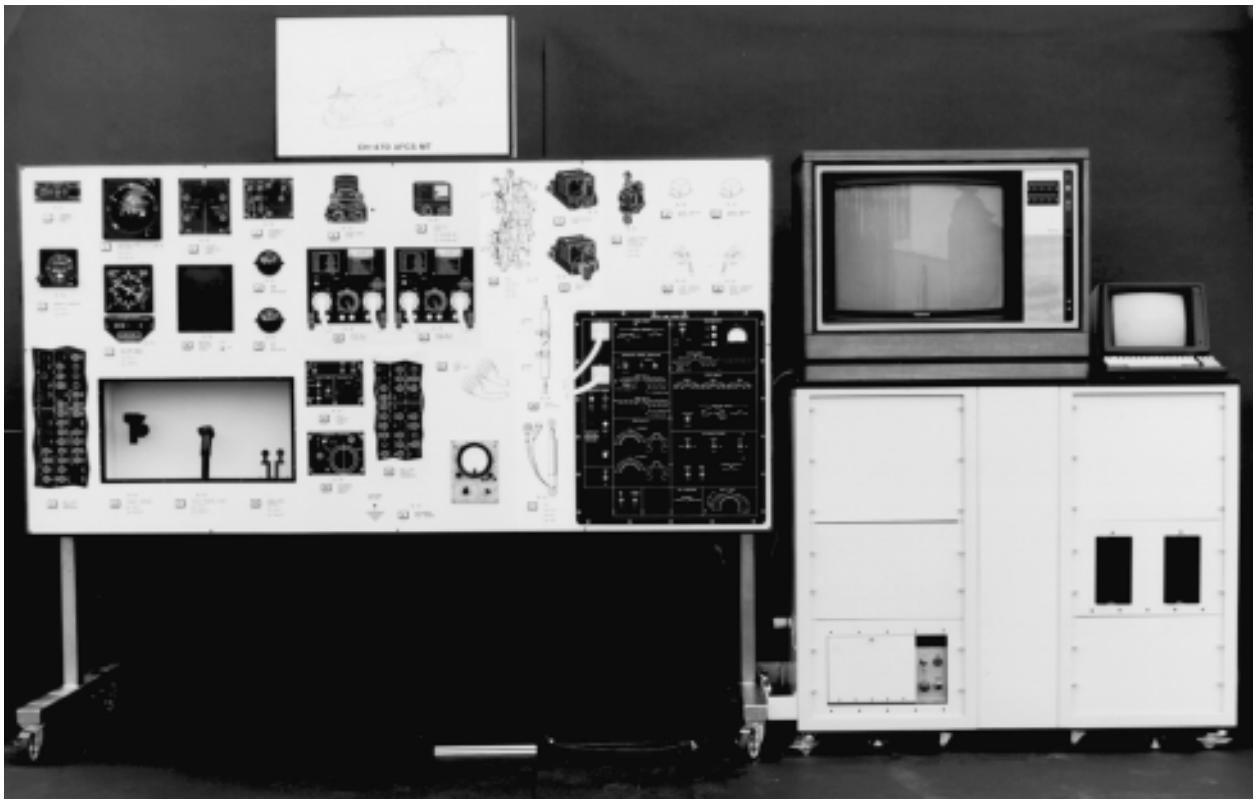
Power Requirements:
120 vac

Applicable Publications:
None

Reference Publications:
TM 55-1520 Series

Training Requirements Supported:
MOSC 35K and 35M

CH-47D HELICOPTER AVIONICS MAINTENANCE TRAINER (INDIVIDUAL)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used to teach avionics mechanics to perform operational checks, adjustments, and trouble shooting the subassemblies and components of the CH-47D Advanced Flight Control System.

Functional Description:
This device uses visual display techniques to replicate the CH-47D Advanced Flight Control System and Operational Test Equipment. The use of panel Program controls enables the operator/student to visually inspect components or subsystems, make pressure or electrical readings, and take corrective actions to return the simulated system to normal operation after insertion of a malfunction by the instructor.

The operations described are accomplished through the use of software system modeling, microprocessor control, state-of-the-art LSI circuit based on logic cards and video presentations controlled by the simulation control processor through a video disk-based television monitor display system.

The Avionics Maintenance Trainer (Individual) consists of the following major assemblies:

a. Display Panel
b. Console
c. Video Disk-Based TV Display System
d. CRT Terminal
e. Frame Structure
f. Protective Cover

The trainer is built to allow viewing from classroom distances. It may also be adjusted in height. The trainer is portable and has lockable casters.

Physical Information:
73" H x 33" W x 18.5" thick

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

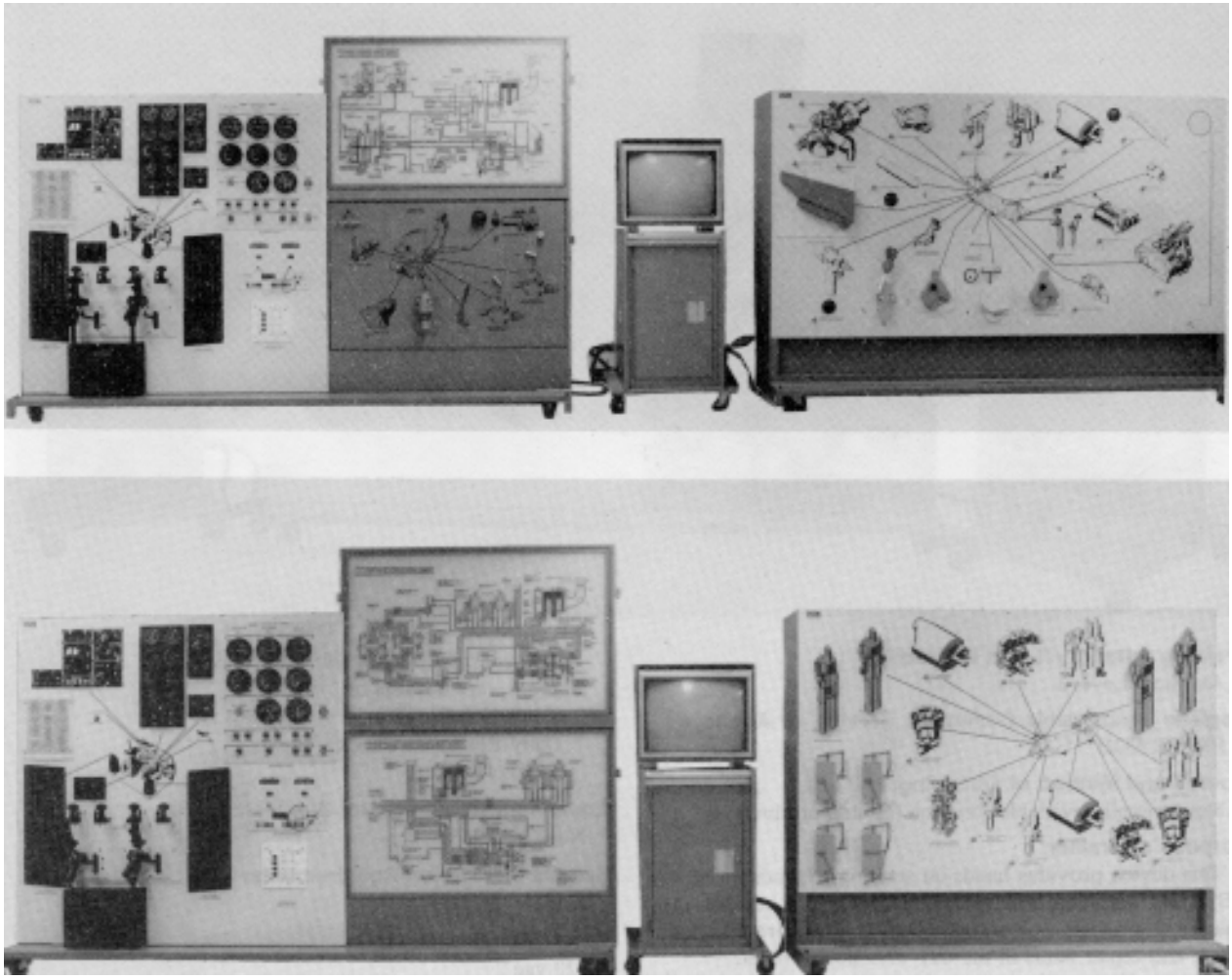
Power Requirements:
120 vac

Applicable Publications:
None

Reference Publications:
TM 55-1520 Series

Training Requirements Supported:
MOSC 35K and 35M

CH-47 HELICOPTER FLIGHT CONTROL AND UTILITY HYDAULIC PANEL TRAINER (FC UHPT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This device provides hands-on training to students of the US Army Aviation Transportation School. It teaches mechanics to perform operational checks, adjust, trouble-shoot, locate, and repair faults in the CH-47D hydraulic system.

Functional Description:
Device 01-128 is an electronic panel trainer which portrays all operations of the Flight Control and Utility Hydraulic systems. It consists of two panels that operate individually or in unison. One set of panels display all modules, valves, pump motors, filters, lines, reservoirs, reducers, regulators, accumulators, meters, gages, and servicing facilities. The other set of panels simulates the Flight Control and Utility systems and subsystems. Operation includes logical sequencing of valves and resulting mechanical functions.

Physical Information:
The trainer consists of:
Two Instructor's Consoles: 29.5" x 38.5"
One Generic Mainframe: 131" x 29.5"
One Visual Display system: 29.5 x 29.5"
One Flight Utility Hydraulic Panel: 90" x 29.5"
The Software consists of :
Simulation Program
Daily Readiness Check
Diagnostic Check

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

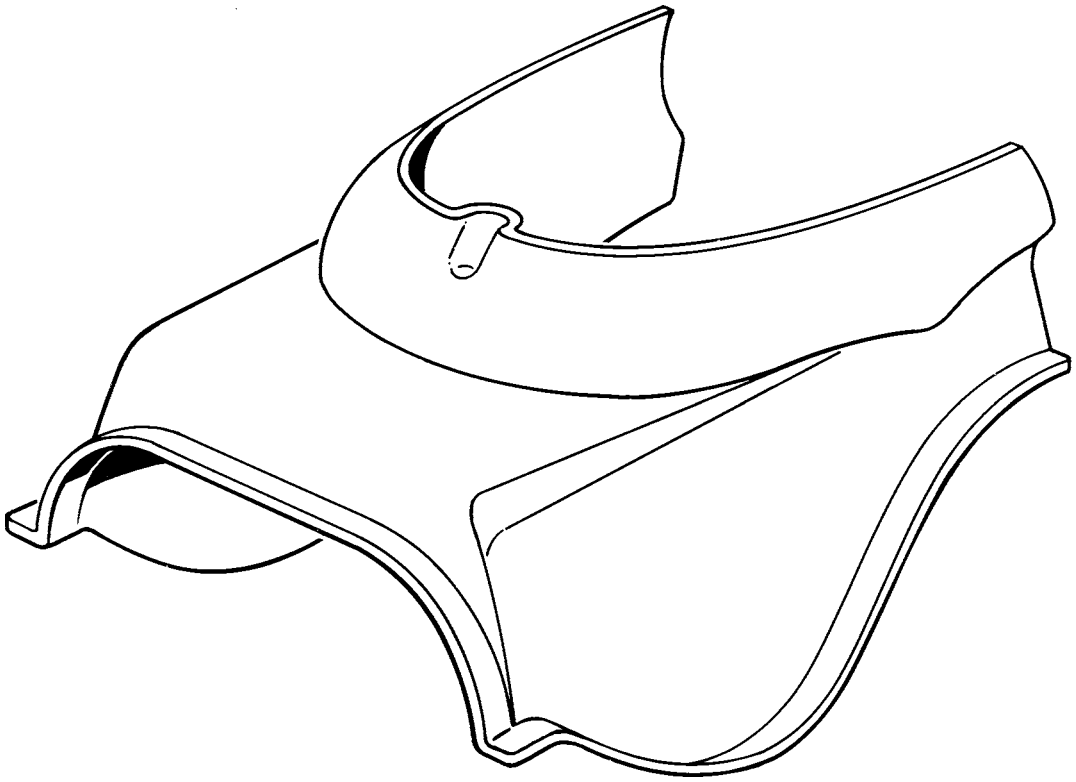
Power Requirements:
120 vac

Applicable Publications:
None

Reference Publications:
TM 55-1520 Series

Training Requirements Supported:
SC-71
MOSC 67U
68B 68D 100CG

TRAINING AID BLIND FLYING HOOD: CHANNEL VISION PERSONNEL



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
ATCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
The trainer is used to teach aviator personnel instrument flying or blind flying in fixed wing aircraft.

Functional Description:
The device is a polystyrene pivotable face shield attached to the aviator's crash helmet. When the device is in place it allows the student to view the complete instrument panel but restricts peripheral vision. This restriction to vision is removable by the upward flick of a finger.

Physical Information:
8-1/16" x 9-3/8" x 6"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
FM 1-50

Training Requirements Supported:

MOSC 15 and 100

ATMTC 1-135 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

ATMTC 1-136 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

ATMTC 1-137 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

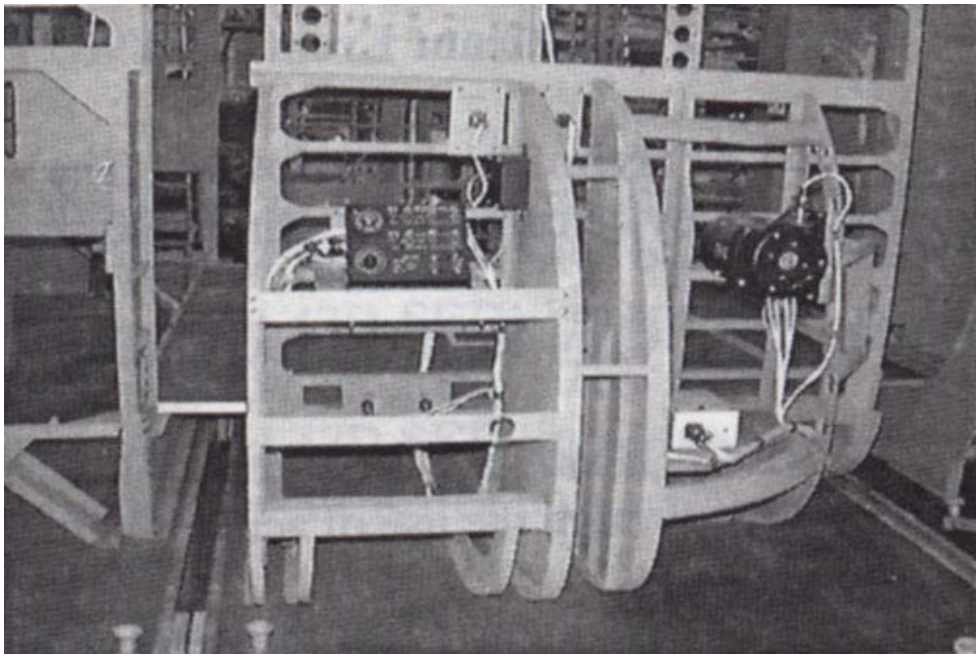
ATMTC 1-144 Tasks

4501	4504	4506	4510
4502	4505	4509	4511
4503			

ATMTC 1-145 Tasks

4501	4504	4506	4510
4502	4505	4509	4511
4503			

CH-47D SINGLE POINT PRESSURE REFUELING SYSTEM TRAINER (CH-47D SPPRST)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The training device simulates and displays fuel flow and indicator actions during pressure refueling, intertank transfer functions, operational checks, and troubleshooting procedures for the CH-47D Chinook Helicopter, Aircraft Tail #91-0271.

The CH-47D SPPRST uses both static and animated simulation presentations of the CH-47D aircraft fuel system as training aids for teaching fuel system transfer operations and fuel system troubleshooting techniques. All training scenarios are controlled from the Instructor Console. The instructor may select either pre-programmed scenarios or free play modes of operation. A Graphic Display Unit (GDU) provides the student/trainer interaction. Simulated conditions (e.g., fault insertions, operational checks, etc.) Are selectable by the instructor and presented on the GDU. The large screen GDU interfaces with the Instructor Console to provide duplicate images for student observation.

Functional Description:
The CH-47D SPPRST provides a large screen graphic simulation capable of both static and animated simulation presentations of the CH-47D aircraft fuel system. The device software consists of two Computer System Configuration Items (CSCIs), Simulation and Graphics. The Graphics CSCI updates the Simulation CSCI at user input (e.g., keyboard, mouse, touch-screen). The relevant simulation capability interprets the events and updates the corresponding variable value(s) in memory.

Touch-screens are used for instructor interaction with the device. The CH-47D SPPRST allows the operator to prepare training scenarios at the Instructor Console using a menu driven authoring system. The instructor may select and customize various training tasks (including fueling, defueling, intertank transfer or fuel feed) that have been stored on the removable disk. After a scenario has been developed, it may be displayed on the GDU and the Instructor Simulation Monitor (ISM) as a static/animated graphics display. During animation, the operator maintains full control of the training scenario. The operator has the capability to insert faults, pause the simulation, or end the simulation at any time. An administrative database is also provided for student record storage.

The CH-47D SPPRST is comprised of four major functional divisions. These major components are contained in two separate pieces of equipment, the Instructor Console and the Graphics Display Unit. This configuration produces a learning environment using a simple design and components with a high degree of reliability, maintainability, and safety.

Physical Information:
Graphic Display Unit: 55"L x 32"W x 73"H, weight - 350 lbs. (154.5 kilos)
Instructor Console: 54 5/16"L x 48 3/4"W x 59 7/32"H, weight - 800 lbs. (363.6 kilos)

Equipment Required, Not Supplied:
Tool Kit, Electrical Repair, Army Aircraft, NSN 5180-00-323-49155C

Special Installation Requirements:
Six (6) 13" CRT monitors are installed to enhance Individualized Training Availability.

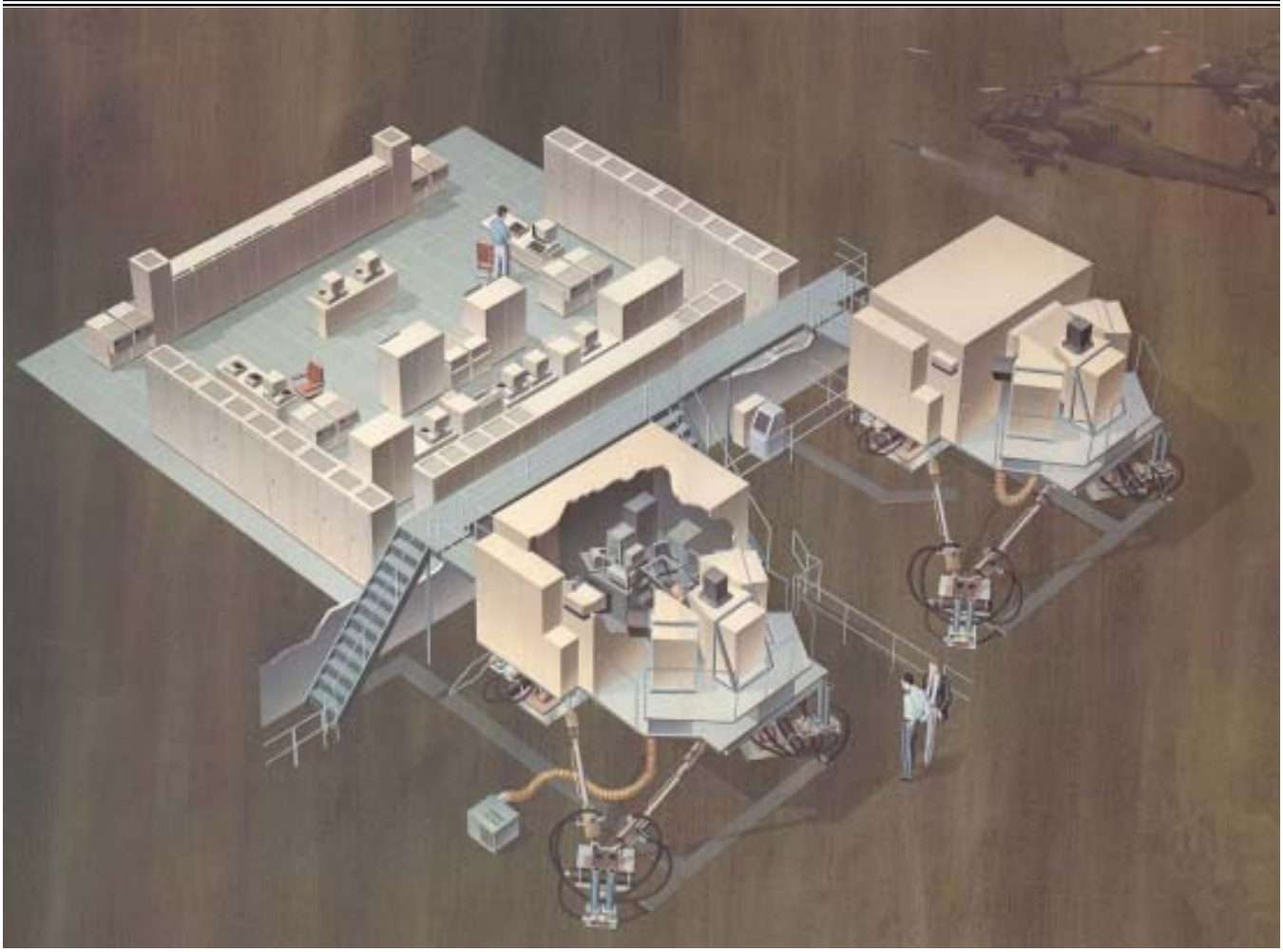
Power Requirements:
Volts: 120 vac
AMPS: 13.85
Phase: Single
Hz: 60
Watts: 1461.4

Applicable Publications:
Operation and Maintenance Manuals for the CH-47D Single Point Pressure Refueling System Trainer.

Reference Publications:
TD 1-6910-703-2
TD 1-6910-703-10

Training Requirements Supported:
MOS 67U10, Medium Lift Helicopter Repairman and Refresher Training for Non-Commissioned Officers.

AH-64 COMBAT MISSION SIMULATOR



Training Category/Level Utilized:
Aviation Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Institutional and field use to support combat skills initial, refresher, and sustainment training of unit aircrews.

Functional Description:
The AH-64 CMS is designed to provide a training capability for flight and weapons delivery, normal and emergency procedures, and sensor system operating tasks required in the operational design of the basic helicopter. These systems include the pilot night vision sensor (PNVS) and the gunner's target acquisition and designation sight (TADS) systems. The simulator consists of pilot and copilot/gunner modules, instructor modules, motion subsystems, visual subsystems, and a computer complex. The pilot and copilot/gunner trainee modules are replicas of the actual aircraft cockpits and each is mounted on a six degree-of-freedom motion base. The visual system provides a current state-of-the-art out-the-window scene and sensor imagery to each of the appropriate crew member video displays. Simulated imagery includes forward looking infrared (FLIR), day television (DTV), and direct view optics (DVO). The simulator is operated through the computer complex which fulfills subsystem interface requirements. The training functions are controlled from the instructor's station located in each trainee module. The pilot and copilot/gunner have the capability to train individually or as a crew performing an integrated combat mission,

Physical Information:

Cockpit Area:	1080" x 600" x 420"
Computer Room:	768" x 480" x 120"
Hydraulic Area:	144" x 192" x 120"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatically controlled building that provides 7000 sq. ft. of space and that maintains an ambient temperature of 70 degrees F. With a relative humidity of 60% or less is desirable.

Power Requirements:

120/208 vac, 3 phase, Wye connected, 60 Hz, 4 wire
277/480 vac, 3 phase, Wye connected, 60 Hz, 4 wire

Applicable Publications:

TD 55-6930-213 series

Reference Publications:

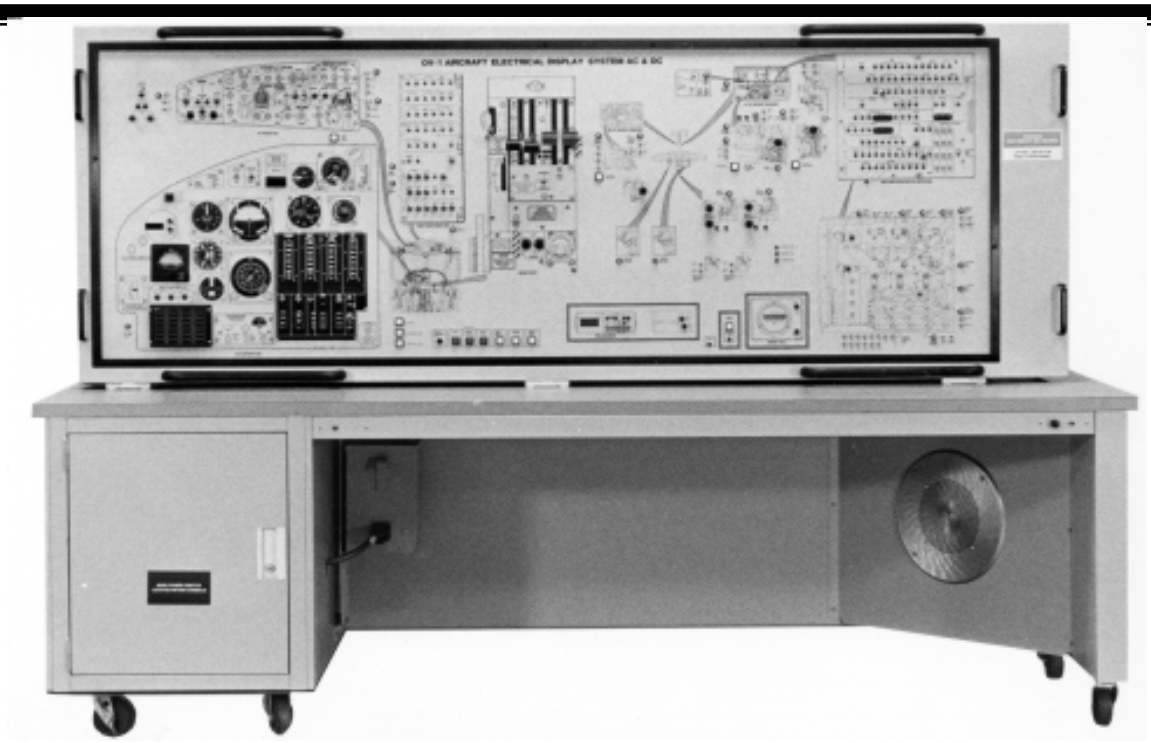
TM 55-1520-238 Series

Training Requirements Supported:

ATM Tasks

1000	1001	1002	1003
1004	1007	1013	1015
1016	1017	1018	1020
1021	1022	1023	1025
1026	1027	1028	1029
1031	1032	1033	1034
1035	1037	1038	1039
1051	1052	1053	1054
1055	1062	1063	1064
1068	1075	1076	1077
1078	1079	1080	1081
1082	1083	1090	1095
1098	1099	1100	1101
1102	1103	1104	1105
1106	1107	1108	1119
1140	1141	1142	1143
1144	1145	2004	2006
2007	2008	2018	2019
2020	2042	2043	2044
2049	2050	2052	2055
2061	2063	2065	2066
2067	2069	2072	2082
2083	2090	2091	

AVIATION MAINTENANCE INTERCHANGEABLE TRAINER (AMIT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is used for individual training to provide a comprehensive means of teaching maintenance, and trouble-shooting procedures for the OV-1 Mohawk aircraft.

Functional Description:
The Aviation Maintenance Interchangeable Trainer (AMIT) is a computer driven procedural maintenance panel trainer designed and engineered to train entry level soldiers how to troubleshoot and maintain the OV-1 Mohawk Aircraft Propeller, Environmental Control System, Electrical, and Vertical Instrument Display systems. Special tools, diagnostic, and servicing equipment are replicated to ensure actual maintenance realism. Interchangeable panels are designed to provide for ease of program of instruction changes. AMIT is composed of two student consoles, four interchangeable panels, slide projection system, an instructor station with CRT and keyboard and printer. The menu driven software is "user friendly" and the digital sound system accurately plays back authentic Mohawk aircraft associated sounds. AMIT is also equipped with a storage cabinet capable of storing up to four panels.

Physical Information:
Instructor Station: 44" H x 31" D x 24" W; 100 lb
Student Console 1: 63" H x 30" D x 96" W; (Panel Mounted) 500 lb
Student Console 2: 60" H x 30" D x 39" W; 100 lb
Storage Cabinet: 81" H x 32" D x 103" W; 800 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

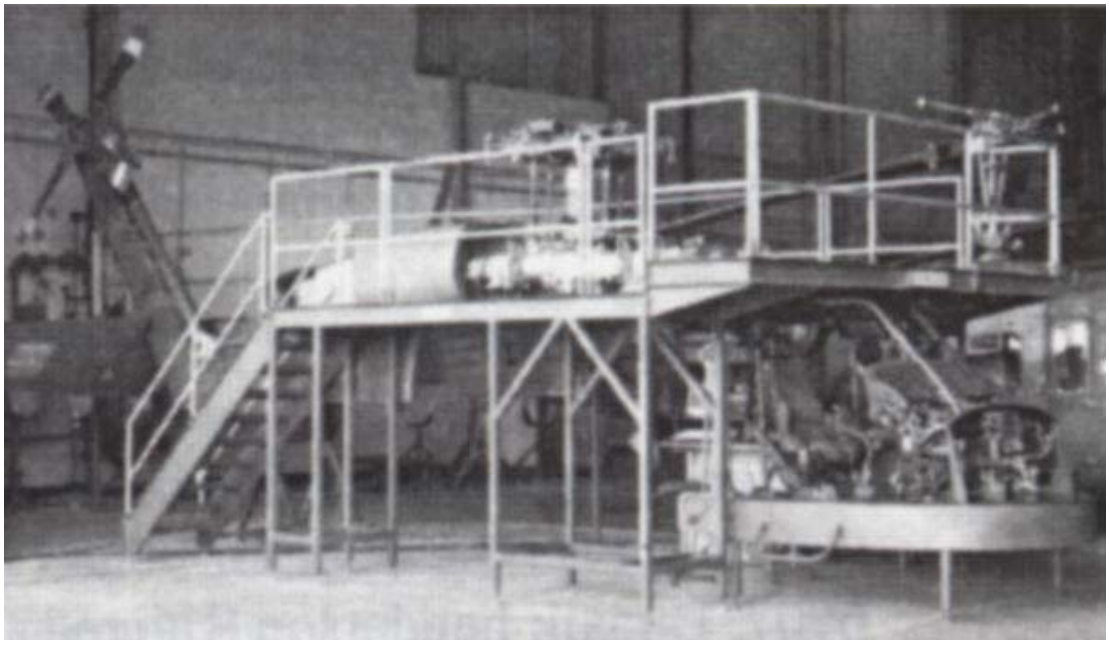
Power Requirements:
110 vac, 60 Hz
220 vac, 50 Hz

Applicable Publications:
TM 55-6910-702-10
TM 55-6910-702-34P

Reference Publications:
(Information not available)

Training Requirements Supported:
MOSC 66H, 67H, 68F

UH-60A BLACKHAWK Composite TRAINER



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer provides a realistic environment for an instructor to demonstrate installation, location and operation of electrical, hydraulic, engine, and flight control systems and components on the UH-60 Black Hawk aircraft.

Functional Description:
Under Instructor control, the instructor can select any of three modes of operation: cockpit, aircraft, and joint modes. In the cockpit mode, the student sees all the indicators that would be seen in an operational aircraft. The aircraft mode incorporates the hydraulic and flight control systems. The joint mode allows operation in the cockpit mode and aircraft mode. System operation is controlled by a microprocessor.

Physical Information:
This trainer is constructed of welded tubular steel and steel channel frames for support, utilizing actual aircraft components. It contains a cutaway main and tail rotor transmission, main rotor hub, stubbed blades, shortened power train, and flight controls with a self contained hydraulic system. A provision for the installation of hydraulic test equipment has been incorporated, as well as a provision for fault insertion by the instructor.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

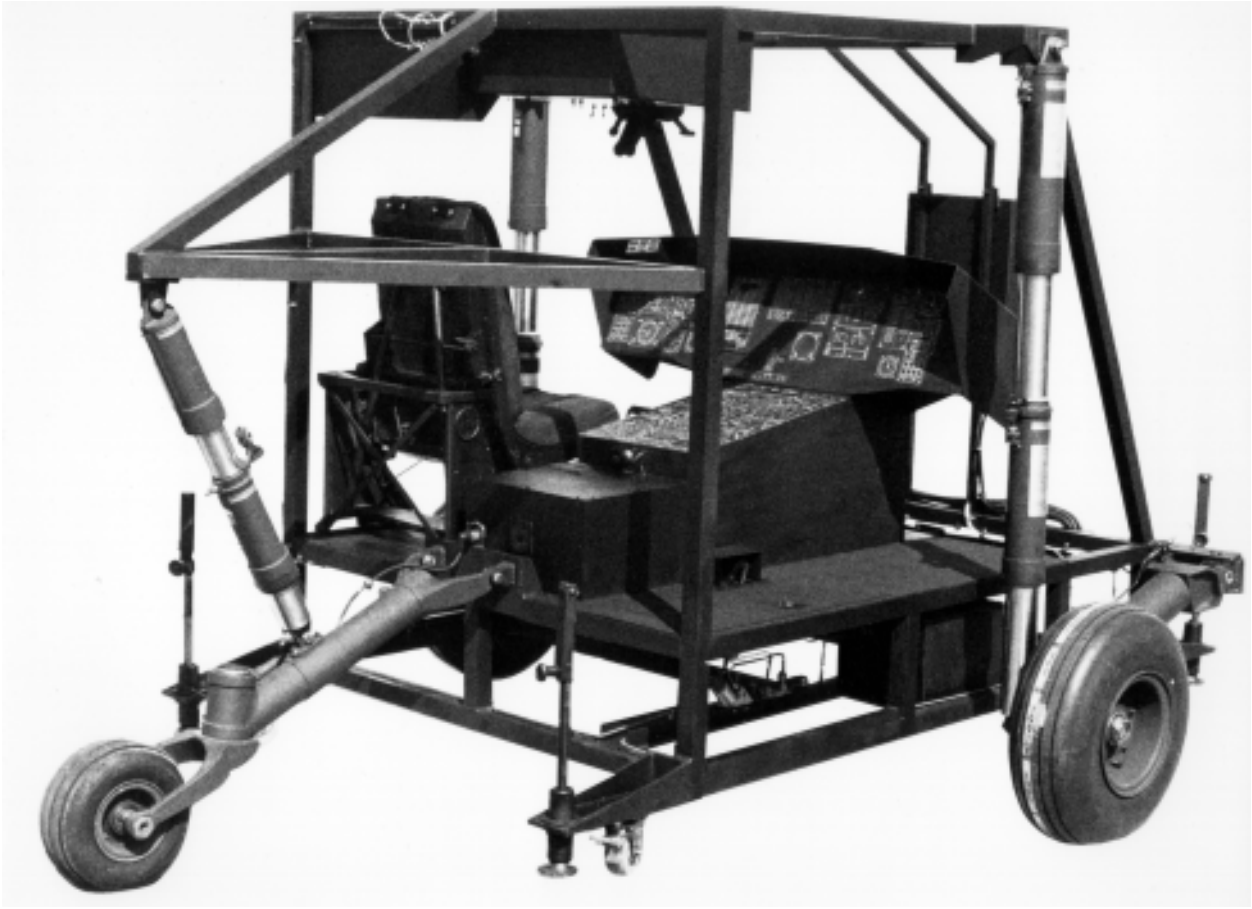
Power Requirements:
220 vac

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

UH-60 LANDING GEAR TRAINER (LGT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Provides a realistic classroom environment for training and evaluating utility helicopter personnel in the servicing, troubleshooting and repair of actual UH-60 helicopter landing gear and braking system.

Functional Description:
DVC 01-141 consists of five major assemblies which, when combined, provide the student with a realistic maintenance trainer capable of rapid fault insertion and real time trouble-shooting. These assemblies and a description of their functions follows:

a. Instructor Panel Assembly. This panel contains various switches which allow the instructor to apply power to the trainer and insert specific faults. Using the panel, the instructor can apply or remove power using the Master Power On/Off switch, and can remove power using the Emergency Power Off Switch. The instructor panel allows the instructor to insert the following malfunctions:

(1) Tail Wheel Light
(2) Parking Brake Light
(3) Left Drag Beam
(4) Right Drag Beam
(5) Right Brake Pedal Bottoms Out
(6) Left Brake Pedal Does Not Hold
(7) Tail Wheel Continuity.

(b) Simulated Cockpit Assembly. This assembly partially simulates the cockpit of an actual UH-60 helicopter. The cockpit consists of the following assemblies and their respective functional components:

(1) Lower Console
Functional Miscellaneous Switch Panel
(2) Overhead Panel
Functional Caution/Advisory Panel Circuit Breaker
Functional Tail Wheel Lock Circuit Breaker
Functional Battery Switch
Functional External Power Switch
Functional Hydraulic Leak Test Switch
Functional Back-Up Hydraulic Pump Switch
(3) Instrument Panel (Co-Pilots Side)
Partially Functional Caution/Advisory Panel
Partially Functional Master Warning Panel
(4) Co-Pilot's Seat
(5) Directional Pedals (Stationary with operational toe brakes)
(6) Parking Brake Handle

These assemblies are full size and dimensionally correct in their mounting on the trainer cockpit structure. Functional components perform the same as in an actual UH-60 helicopter. Nonfunctional components are dynamark representations with the exception of the 3-D Engine Control Quadrant mock-up in the Overhead Panel.

c. Landing Gear System. This system consists of the main landing gear (left and right) and the tail landing gear. It functions the same as in an actual UH-60 helicopter. A trainer unique cable and receptacle have been added to the left and right landing gear Drag Beam Switches and connected to the Instructor Panel to enable fault insertion. The tail wheel landing gear contains no trainer unique components. Cabling for the tail wheel landing gear is connected to the trainer harness to allow for fault insertion from the Instructor Panel.

d. Brake System. This system consists of functional components with the exception of the brake lines, hydraulic fluid reservoir, and two trainer unique valves in the brake lines. These valves are connected to the Instructor Panel to allow fault insertion and simulation. The following are functional components of the brake system:

(1) Co-Pilot Master Cylinders (2)
(2) Slave Mixer Valve
(3) Parking Valve
(4) Brake Assemblies (2)
(5) Co-Pilot Toe Brakes (2)
(6) Parking Brake Handle

Physical Information:
84" H x 133" L x 84" W; 680 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
120 vac, converted to 28 vdc by a 28 vdc power supply

Applicable Publications:
TD 1-6930-704, Instructor Utilization Handbook

Reference Publications:
TM 55-1520-237-23
TM 55-1520-237-T
DA PAM 738-751

Training Requirements Supported:
MOS 67T10
MOS 67T30

UH-60L COMMAND INSTRUMENT SYSTEM TRAINER (CIST)

NEW PHOTO REQUIRED

Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Trainer is used to train aviation maintenance personnel in the performance of operational checks, troubleshooting techniques, and fault isolatin procedures.

Functional Description:
The trainer is designed to allow the instructor to select a training task which provides the student with a visual simulation of the UH-60L Command Instrument System (CIS) and affected instruments during the performance of a task. Each student has the ability to individually perform trouble-shooting and fault isolation procedures by advancing through theICW and determining the correct path to take.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Classroom

Power Requirements:
120 vac, 60 Hz

Applicable Publications:
TD 01-6910-716 Series

Reference Publications:
TM 55-1520-237 Series
TM 11-1520-237-23

Training Requirements Supported:
68N10 MOS course

UH-60 SYNTHETIC FLIGHT TRAINING SYSTEM

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide realistic individual and crew qualification training, and sustainment of day/night visual and instrument flying skills, combat skills, and flight emergency procedures for both the pilot and copilot.

Functional Description:
The Black Hawk Flight Simulator is a cockpit mounted on a six degree of motion platform. The cockpit is provided with visual imagery derived from a computer generated imagery system. The cockpit is an authentic replica of the actual aircraft from the pilot and copilot station forward, with an on board instructor station to control training and evaluate student performance.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

AH-64 COCKPIT, WEAPONS AND EMERGENCY PROCEDURES TRAINER (CWEPT)

Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The CWEPT provides front and back seat operator training on the location and functions of instruments and controls in the AH-64A as well as start-up, shutdown, weapons systems employment, and emergency procedures.

Functional Description:
The CWEP is designed to support the AH-64 attack helicopter initial aircrew qualification training at the institution and aircrew continuation training in the field. The device is a replica of the pilot and copilot/gunner cockpits with computer generated vector graphic visual systems. This device provides the means to train all cockpit, weapons, and emergency procedures tasks including: switchology, target recognition, acquisition (using 30-mm, 2.75 inch FFAR, HELLFIRE, and laser) and proper procedures. Training is limited to switchology procedures only for the survivability equipment task. Threat interplay consists of 16 targets, 4 of which may be moving per exercise.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
116 vac, 208 vac

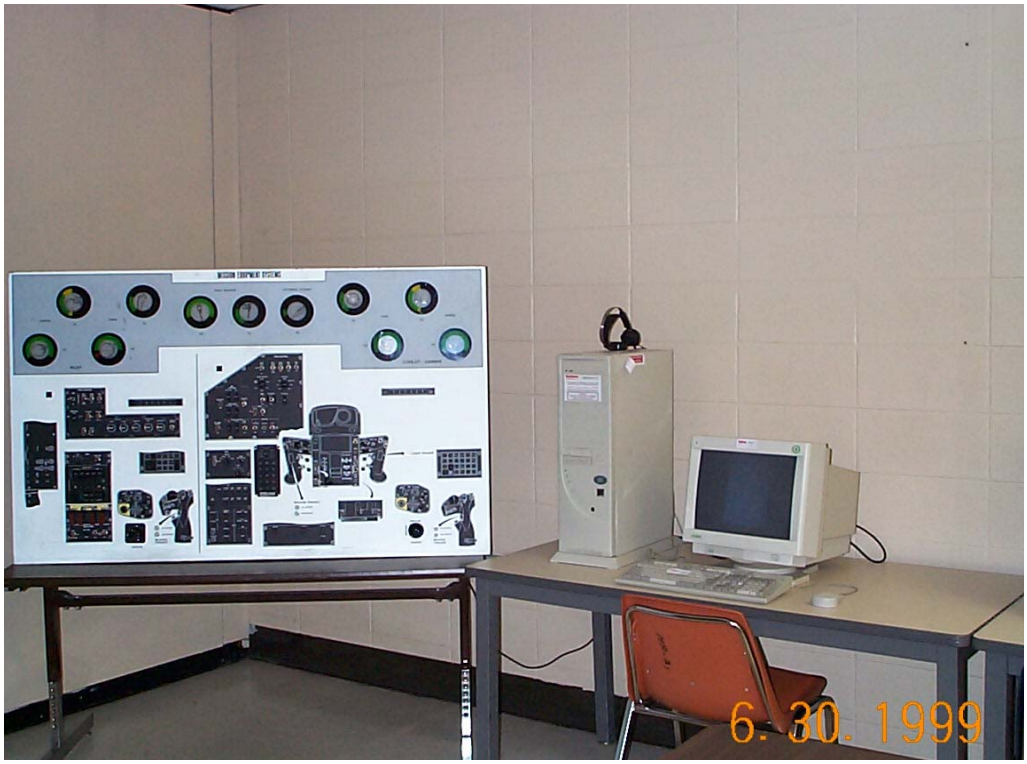
Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

AH-64 CLASSROOM SYSTEMS TRAINER (CST)

DVC 01-148/1	**AH-64 Classroom Systems Trainer (CST) Mission Equipment Management Systems**
DVC 01-148/2	**AH-64 Classroom Systems Trainer (CST) Fuel System**
DVC 01-148/3	**AH-64 Classroom Systems Trainer (CST) Anti-Ice System**
DVC 01-148/4	**AH-64 Classroom Systems Trainer (CST) Electrical System**
DVC 01-148/5	**AH-64 Classroom Systems Trainer (CST) Hydraulic System**
DVC 01-148/6	**AH-64 Classroom Systems Trainer (CST) Pressurized Air System**
DVC 01-148/7	**AH-64 Classroom Systems Trainer (CST) Digital Automatic Stabilization Equipment (DASE)**
DVC 01-148/8	**AH-64 Classroom Systems Trainer (CST) Fault Detection Location System**
DVC 01-148/9	**AH-64 Classroom Systems Trainer (CST) Engine and APU System**
DVC 01-148/10	**AH-64 Classroom Systems Trainer (CST) PTWS (Hellfire Missile) System**
DVC 01-148/11	**AH-64 Classroom Systems Trainer (CST) ARCS (2.75 Rocket) System**
DVC 01-148/12	**AH-64 Classroom Systems Trainer (CST) Target Acquisition System**
DVC 01-148/13	**AH-64 Classroom Systems Trainer (CST) Aerial Weapon (30mm) System**
DVC 01-148/14	**AH-64 Classroom Systems Trainer (CST) Integrated Helmet and Display Sight System**
DVC 01-148/15	**AH-64 Classroom Systems Trainer (CST) Doppler Training Device System**



Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Institutional use to support AH-64 aircraft subsystems training.

Functional Description:
The AH-64 Classroom Systems Training (CST) consists of a general purpose mainframe and nine interchangeable panels to replicate the subsystems of the AH-64 aircraft for use in classroom systems training. These subsystems include: fuel, electrical, hydraulic, de-ice, pressurized air, engine and auxiliary power unit, mission equipment, fault detecting and location, and digital automatic equipment. Each panel set (except mission) consists with all switches, circuit breakers, associated panel lights, gauges mounted in the gunner's and pilot's station for each set, and a display panel with lights on an overview of the systems which interacts with the management panel. The system contains slide projectors to show actual photos of systems on the aircraft. The mission set

consists of a management panel and five display panels. It includes the integrated helmet and designation sight system (IHADSS), point target weapon system (HELLFIRE), aerial rocket system (2.75), area weapons systems (30-mm), and the target acquisition and designation sight (TADS) system. The CST is computerized to show all systems in normal and degraded operations. Malfunctions are programmable through the computer by a hand-held controller.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

TARGET ACQUISITION DESIGNATION SIGHT (TADS) SELECTED TASK TRAINER (TSTT)

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The TSTT is a single seat trainer which provides Target Acquisition Designation Sight system training for the AH-64A AQC. It provides training for the following critical individual tasks: AN/ASN 128 or 137 Doppler control head switchology, TADS internal and out front boresight procedures, Fire control panel switchology, and Optical Relay Tube (ORT) switchology.

Functional Description:
This device consists of three major components: a graphics processor, computer console, and a copilot/gunner training console. The trainer console is an actual TADS system with an added cathode ray tube for visual scenes to portray target. This visual is a motion sensor generated vector graphic system. The TSTT provides the means to practice gunner's station weapons procedures including: switchology, target recognition, acquisition and launch procedures using the TADS, and navigation procedures using the Doppler system.

Physical Information:
Training Console: 30" x 40.5" x 42.5" H
Computer Assembly: 27" x 18" x 29" H
Instructor Display: 17" x 16" x 12" H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

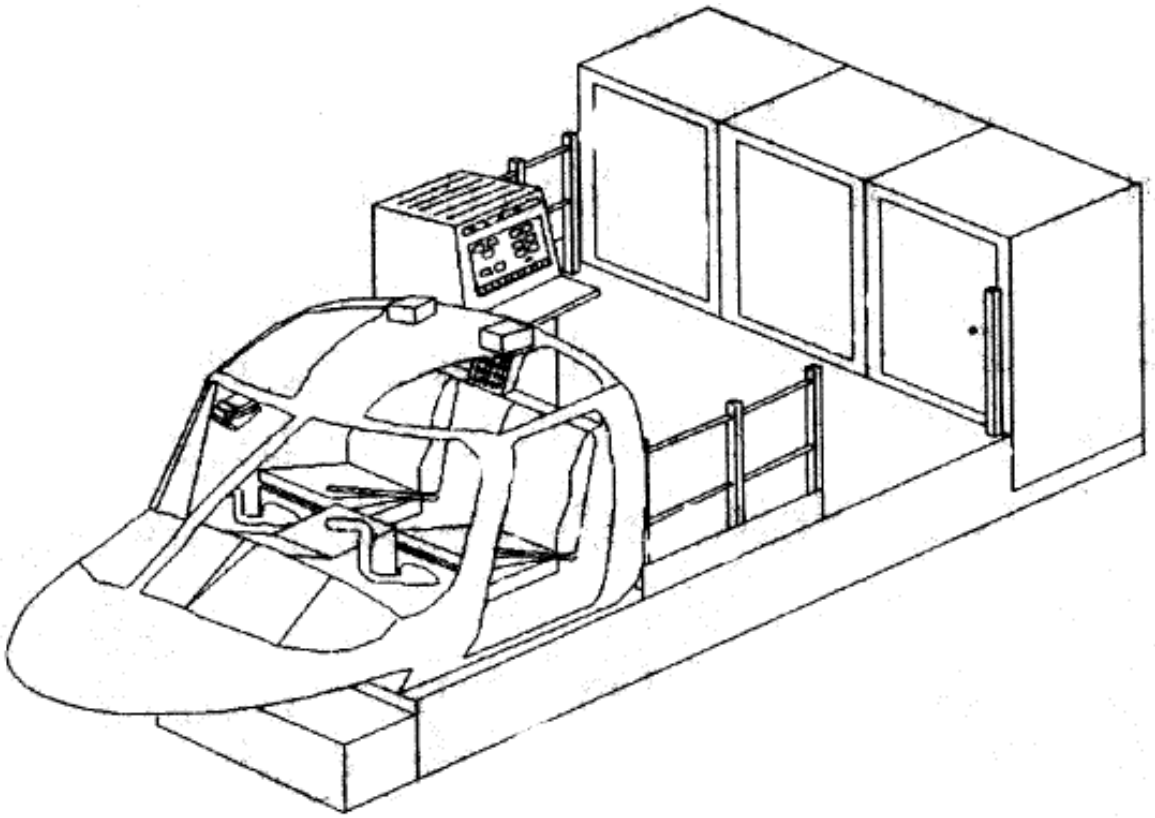
Power Requirements:
115 vac, 10 amp, 60 Hz

Applicable Publications:
Operator Manual, Target Acquisition Designation Sight (TADS) Selected Task Trainer

Reference Publications:
TM 55-1520-238 Series

Training Requirements Supported:
(Information not available)

OH-58D (KIOWA WARRIOR) COCKPIT PROCEDURES TRAINER (CPT)



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The OH-58D CPT provides individual and crew training on cockpit procedures and operation of the weapons systems, communications system, Mast Mounted Sight (MMS), and Airborne Target Handover Systems (ATHS).

Functional Description:
The MMS imagery on the Kiowa Warrior CPT is provided through laser disks. Laser disks are also utilized to display the MFD scenery to the pilot and copilot. The host computer system allows data to be displayed in the TV mode or in the IR mode on either of the displays.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

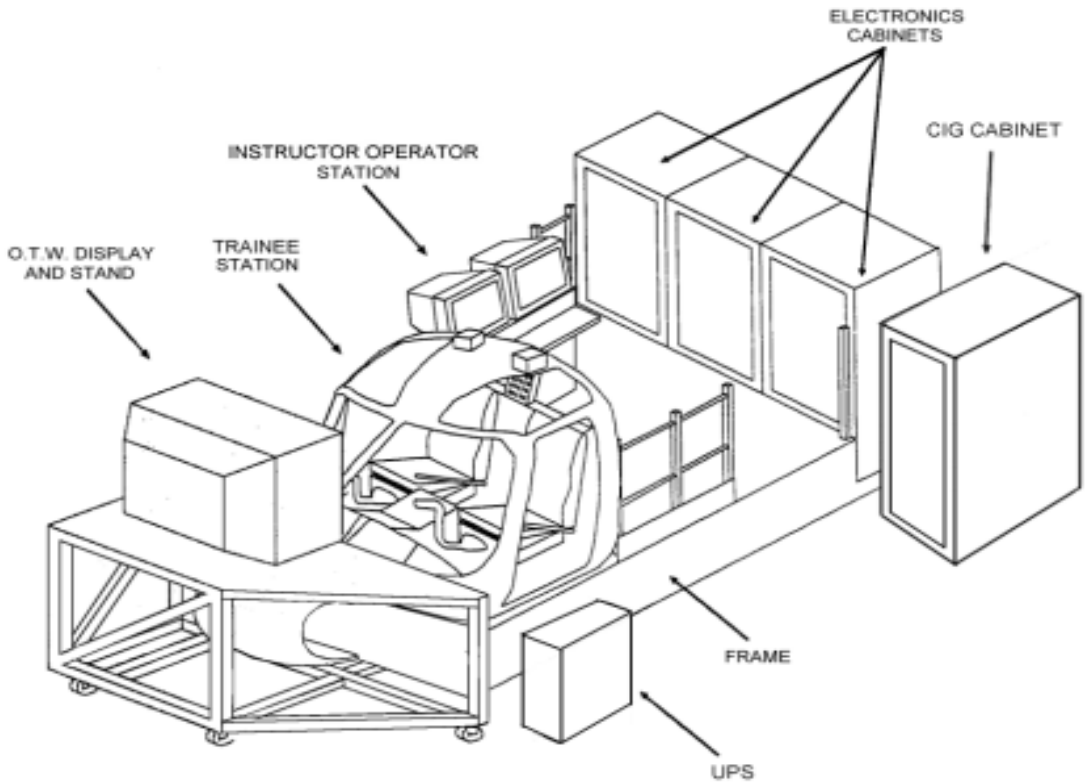
Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

OH-58D (KIOWA WARRIOR) COCKPIT PROCEDURES TRAINER (CPT)



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To train Pilots (officers) in MOS's 115D and 152D. The CPT-IG consists of a cockpit mock up (with visual system), that is networked to other CPT-IGs on a local area network that provides interaction among devices. ModSAF is utilized to provide a realistic threat environment. This will provide for flight line configuration commonality within the OH-58D B.0 aircraft.

Functional Description:
The CPTIG is made up of several subsystems. They are Power Distribution, Electronic Control, Trainee Station, Host Computer, Computer Image Generation, Aural Cue & Communication, Instructor Operators Station, ModSAF Terminal, Video Imagery Cross-Link, and Air Condition/Cooling.

Physical Information:
The height is 6 ft. 5 inches; width 5 ft. 7.5 inches; length 16 ft. 4 inches; and weight 2600 pounds.

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
The CPTIG requires 240/120 VAC, 50/60 Hz, 30-amp service.

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
To train individual aviators at USAAVNC undergoing the OH-58D Aircraft Qualification Course, Instructor Pilot Course, and the Maintenance Pilot Course in the use of the Kiowa Warrior mission equipment package and in start-up, shut-down, and emergency procedures.

Capability/Improvements provides initial qualification training for OH-58D crews, training in communication systems, navigation systems, Improved data modem, ATHS, Mast Mounted Site, weapons systems and ASE.

OH-58D (KIOWA WARRIOR) CLASSROOM SYSTEMS TRAINER (CST) INSTRUCTOR POSITION

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
The classroom Systems Trainer (CST) is one component of the training program designed for OH-58D operators and maintenance personnel. It is a classroom learning system that consists of video terminals set up at individual station. At these stations, students can watch and participate in a variety of training exercises. Each CST classroom also has an instructor station where an instructor uses a monitoring system known as Computer-Managed Instruction (CMI) to track the progress of the students.

Students participation in CST training work at their own pace. Since each student has his own terminal, he is not held back by any other student. As he completes a unit of instruction, he can select another unit and continue his studies. CST training is not, however, isolated training. Rather it is "interactive". In order to complete a unit of study on a CST, a student must continually answer questions, choose appropriate selections, and complete periodic testing before he can advance to the next unit. Any time he has a question or a problem, he can contact the instructor by sending a message directly to the instructor's terminal. The instructor can constantly monitor the progress of each student via a series of displays available on the instructor's software component of the CST - the Computer-Managed Instruction (CMI) system.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

OH-58D (KIOWA WARRIOR) CLASSROOM SYSTEMS TRAINER (CST) STUDENT POSITION

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available).

Functional Description:
The classroom Systems Trainer (CST) is one component of the training program designed for OH-58D operators and maintenance personnel. It is a classroom learning system that consists of video terminals set up at individual station. At these stations, students can watch and participate in a variety of training exercises. Each CST classroom also has an instructor station where an instructor uses a monitoring system known as Computer-Managed Instruction (CMI) to track the progress of the students.

Students participation in CST training work at their own pace. Since each student has his own terminal, he is not held back by any other student. As he completes a unit of instruction, he can select another unit and continue his studies. CST training is not, however, isolated training. Rather it is "interactive". In order to complete a unit of study on a CST, a student must continually answer questions, choose appropriate selections, and complete periodic testing before he can advance to the next unit. Any time he has a question or a problem, he can contact the instructor by sending a message directly to the instructor's terminal. The instructor can constantly monitor the progress of each student via a series of displays available on the instructor's software component of the CST - the Computer-Managed Instruction (CMI) system.

Physical Information:
not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

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UH-60 COCKPIT EMERGENCY PROCEDURES TRAINER (CEPT)

Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide training for Aircraft Qualification Course (AQC) in the normal and emergency operations encountered during start, run-up, and shutdown of a UH-60A/L helicopter.

Functional Description:
The CEPT is a full scale replication of a UH-60 Cockpit. It is reconfigurable from an "A" series UH-60 to an "L" series by changing instruments and selecting the appropriate software load. The trainer consists of the pilot and copilot stations, and instructor console with computer and peripherals.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

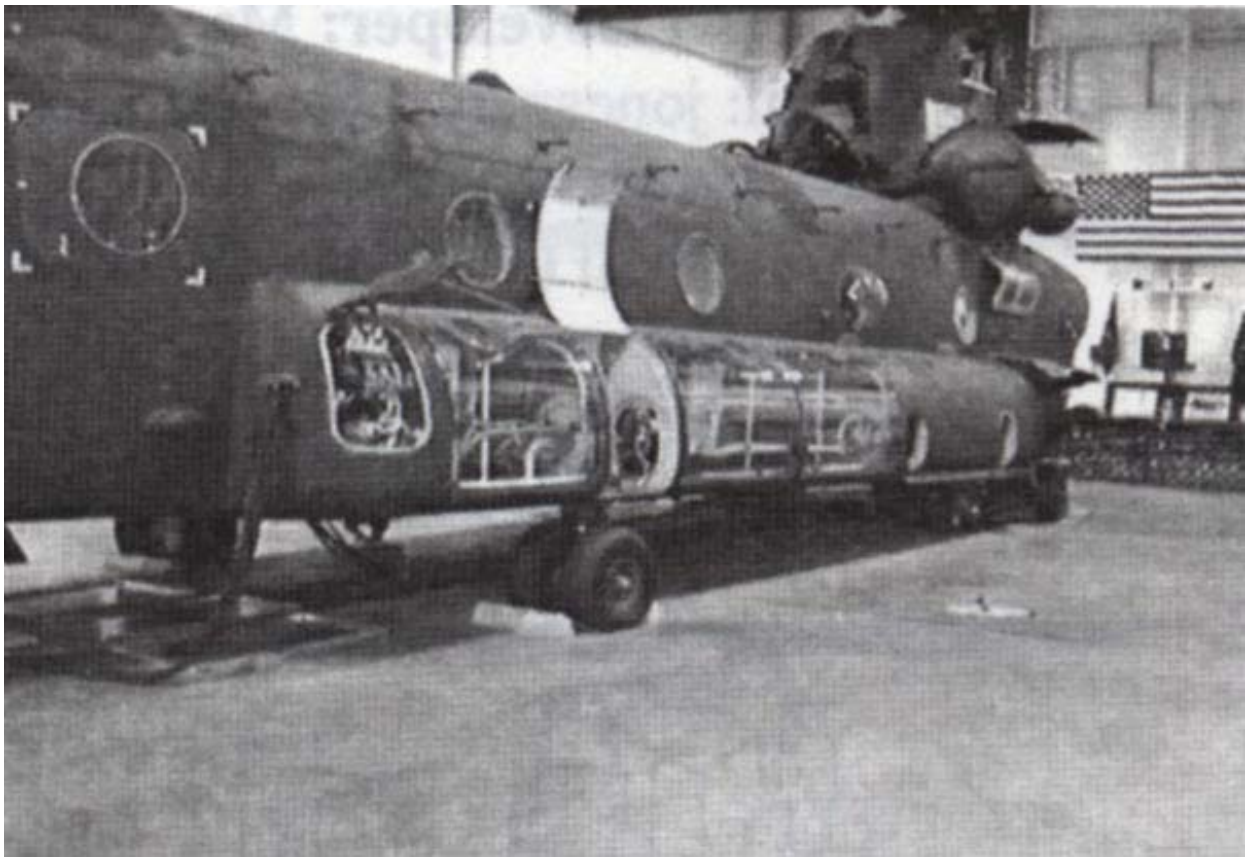
Power Requirements:
115 vac, 3 phase, 60 Hz, 30 Amps

Applicable Publications:
TD 1-6930-707 Series

Reference Publications:
TM 55-1520-237 Searies

Training Requirements Supported:
(Information not available)

GYCH-47D COMPOSITE MAINTENANCE TRAINER (CMT)



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use, providing a realistic environment to demonstrate cockpit procedural functions, including APU and engine operation related to helicopter maintenance. It also demonstrates installation, removal, operation, servicing, trooubleshooting, and adjustment of the electrical, hydraulic, APU, engine, and flight control systems and components.

Functional Description:
The trainer is a YCH-47D helicopter configured as a GYCH-47D composite trainer. All helicopter systems are complete and substantially identical in appearance, feel, and location to those in the CH-47D helicopter so that normal conditions can be observed by the student. Actual components are utilized whenever possible to demonstrate actual helicopter functioning. The instructor has the capability of inserting faults into the trainer to cause abnormal indications in the trainer system.

Physical Information:
The physical characteristics of the training aircraft are the same as a fleet aircraft. The dimensions and weight of the other trainer equipment are as follows:
VAX-11/730 Packaged System - 42"H x 21.25W x 31.5D, 550 lbs.
LA-120 Deckwriter III - 33"H x 27.5"W x 33.8"D, 102 lbs.
H9642-DB Expansion Cabinet with interface unit - 42"H x 21.25"W x 30"D, 405 lbs.
TS11CA Magnetic Tape Unit - 60.25"H x 21.21"W x 30"D, 382 lbs.
LP32-BA Printer - 45"H x 27.5"W x 33"D, 200 lbs.
Instructor's Console - 31"H x 72"W x 36"D, 550 lbs.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

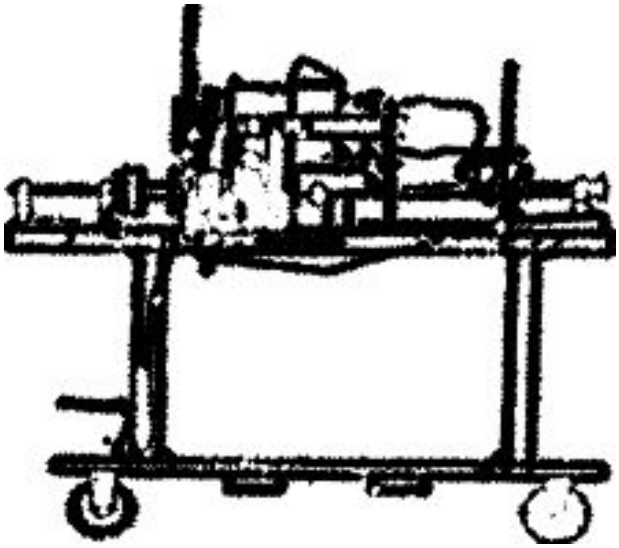
Power Requirements:
440 volts, 60 Hz, 3 Phase, 220 volts, 60 Hz, 3 phase,
115 volts, 60 Hz, single phase

Applicable Publications:
GYCH-47D Operating and Maintenance Instruction Manual

Reference Publications:
TM 55-1520-240 Series
TM 55-1520-240T

Training Requirements Supported:
(Information not available)

OH-58D AHIP (KIOWA WARRIOR) ENGINE MAINTENANCE TRAINER (EMT)



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Engine Maintenance Trainer (EMT) is used to familiarize and instruct personnel in the operation, maintenance, and repair of the OH-58 gas turbine engine. It is used in locating engine components, identification, removal, and installation procedures, and system rigging. The EMT is used for individual qualification of OH-58D Kiowa Warrior maintainer sustainment training. It provides a safe environment for MOS 67S students to learn and practice OH-58D Kiowa Warrior maintenance tasks.

Functional Description:
(Information not available)

Physical Information:
The EMT consists of a complete T-703/AD-700 engine mounted on a transportable steel frame. All fuel, oil, pneumatic, and electrical connections are installed between simulated forward and aft firewalls. The main drive shaft and first two sections of the tail rotor drive shaft are included in the trainer. It also has functional power controls to accommodate rigging procedures.

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

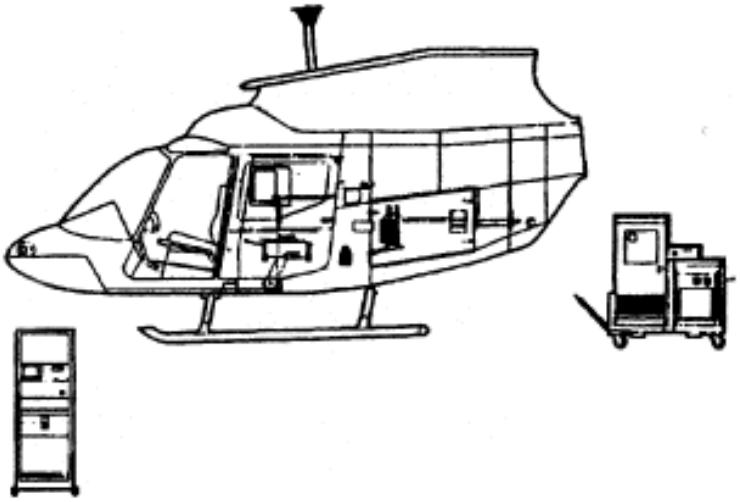
Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
MOS 67S

OH-58D AHIP (KIOWA WARRIOR) COMPOSITE ARMAMENT MAINTENANCE TRAINER (CAT)



Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Composite Armament Trainer (CAT) has the purpose of training weapons system troubleshooting on the combined weapons systems in the aircraft as well as the MMS/weapons boresight. The trainer also allows students to be trained on the MMS, PDU, and CDS. The instructor has the capability of inserting faults into the trainer (opens, shorts, etc.) and allowing the students to troubleshoot the systems on board the aircraft.

Functional Description:
The CAT is operated through the use of a power cart and the Computer Fault Insertion Training System (CFITS). The trainer contains all the aircraft systems with the exception of the MMS. MMS functions are simulated in the CFITS, however a requirement of the trainer is that a functional MMS may be used. For the hardware that is not required to be functional, weighted and balanced replicas are installed.

The CFITS serves as a relay controller as well as providing some inputs to the data bus. This hardware utilizes a common computer with the AET and the CET. The difference in the CFITS is in the software that the system is running and the controller back plane in the controller cabinet. In addition to controlling the faults that the instructor chooses to initiate, it provides the student scoring and class tracking.

The Power Cart used in conjunction with this trainer is common with the AET and the CET and serves as the power source for the simulation of the aircraft components contained within the CAT. The CAT contains all of the aircraft components required for operation of the weapons systems. Because of this all of the components in the armament system and the MMS can be trained. Because of the use of aircraft hardware the software concurrent problems are negated.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

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SPECIAL OPERATIONS AVIATION COMBAT MISSION SIMULATOR (SOACAM) MH-60K AND MH-47E

Training Category/Level Utilized:
Aviation

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The Special Operations Aircraft Combat Mission Simulator (SOA CMS) devices are high fidelity flight simulators that provide initial qualification, sustainment, and mission rehearsal training to Special Operations aircrews. Control loading systems provide realistic tactical and force cueing in the control system and a hydraulic seat shaker provides the simulation of high frequency rotor blade effects.

Functional Description:
The SOA CMS contains simulated aircraft systems to include: Integrated Avionics System "Glass Cockpit"; Automatic Flight Control System; Multi-Mode Radar (provides Terrain Following/terrain Avoidance); FLIR (AAQ-16); and complete Aircraft Survivability suite and NAV/COMM systems and subsystems.

Physical Information:
Consists of an MH-47E and MH-60K cockpit capable of simulating the unique equipment and missions of the MH-47E and MH-60K aircraft. The SOA CMS is a side-by-side configuration with room for one instructor/operator and one observer.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

TH-67 COCKPIT PROCEDURES TRAINER

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue.

Purpose of Trainer:
For classroom use to familiarize trainees with the TH-67 Helicopter controls, and to give the trainees realistic practice in performing; Before starting engine, Starting engine, Engine run-up, Engine shutdown, Start malfunctions, and In-flight emergency procedures.

Functional Description:
The trainer consists of a student station, which is a full scale reproduction of the TH-67 cockpit, instructors platform, and instructors console with monitor, keyboard, and chair. All controls, indicators, etc., pertinent to the practice of the required procedures are either actual aircraft components or operable facsimiles of the helicopter equipment. The illusion of realism is imparted through control feel and sound systems. Controlled by the computer, which provides the physical and aural cues associated with engine operation and flight conditions. Malfunctions, may be introduced by the instructor, through his controls, or by the student's failure to follow correct operational procedures.

Physical Information:

Cockpit Assembly:	78" x 54" x 76", 635 lbs.
Instructor Platform:	91" x 37" x 44", 148 lbs.
Control Console:	28" x 26" x 44", 65 lbs.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
A climatically controlled classroom that maintains ambient room temperature at 70F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:
115 vac, 60 Hz outlet

Applicable Publications:
TH-67 Maintenance Manual for CPT, Doc # 109896-1

Reference Publications:
TH-67 Operators Supplement

Training Requirements Supported:
MOSC 15-150 series.
Start, Run-up, Shutdown, Start malfunctions, and Emergency Procedures IAW Primary flight training guide.

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OH-58D KIOWA WARRIOR COMPOSITE ELECTRICAL TRAINER (CET)

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:
Aviation 1, 2

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The CET provides training in electrical system trouble-shooting on the combined electrical systems in the OH-58D aircraft.

Functional Description:
The CET is similar in appearance to the aircraft and includes the tail boom because of the electrical components installed there. The CET is operated through the use of a power cart and the Computer Fault Insertion Training System (CFITS). The trainer allows students to be trained on the MMS, PDU, and CDS electrical controls as well as the aircraft wiring harnesses and electrical distribution system. With the CFITS, the instructor is capable of inserting electrical faults into the trainer, (opens, shorts, Etc.) and allowing students to troubleshoot the systems on board the aircraft. The CFITS serves as a relay controller as well as providing some inputs to the data buss. This hardware utilizes a common computer with the AET and the CAT. The difference in the CFITS is the software that the system is running and the controller back plane in the controller cabinet. In addition to controlling the faults that the instructor chooses to initiate, it provides the student scoring and class tracking.

Physical Information:
377"L x 119"H x 100"W; 1990 lbs.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
3 Phase 220v facility power for the power cart..
120v single phase for the CFITS.

Applicable Publications:
None

Reference Publications:
TM 55-1520-248 Series

Training Requirements Supported:
68FW5, 68J10, 68J30, 151A.

CREW STATION MISSION EQUIPMENT TRAINER (CSMET)

Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The purpose of the trainer is to provide a means for training and evaluating the crew of the KW OH-58D helicopter in operation and employment of the KW Mission Equipment Package (MEP). The trainer is used to support refresher and sustainment training of those skills required to initialize, operate and employ the Kiowa Warrior OH-58D Weapons Systems, the Aircraft Survivability Equipment (ASE), the Communication and Navigation Equipment, the Mast Mounted Sight (MMS), the Cockpit Display Systems and Controls, the Airborne Target Handover System (ATHS), and a Modified Airborne Video Tape Recorder (AVTR). The trainer is designed to have a small foot print and operate in a class room environment utilizing existing commercial power. The CSMET maybe networked on a Local Area Network (LAN) or on a Wide Area Network (WAN).

Functional Description:
The CSMET is intended to train crewmembers in the operation and employment of the KW Mission Equipment Package (MEP). The CSMET shall support refresher and sustainment training of those skills required to initialize, operate and employ the weapons systems. Along with aircraft survivability equipment, communication and naviga-

tion equipment, mast mounted sight, cockpit display systems and controls, the pilot display unit, data transfer system, airborne target hand over system, ANVIS display subsystem, and airborne video tape recorder.

Physical Information:
The KW CSMET is designed to fit into the Government furnished facilities. The KW CSMET is designed to be installed, operated, and maintained in a classroom of size 8 feet by 10 feet.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
It must be moved through a single door, 3'-0" wide by 6'-8" high. It also operates in an environment of 60-85 degrees Fahrenheit with humidity of 20% to 80%m non-condensing. Estimated heat load system is 12357 BTU/Hr.

Power Requirements:
The CSMET requires a single-phase, 50 amp, 120 VAC input circuit equipped with a NEMA 5-50 receptacle.

Applicable Publications:
TD 01-6910-715 Series

Reference Publications:
TM 55-1520-248 Series

Training Requirements Supported:
To train OH-58 Kiowa Warrior crews in the operation and employment of the Kiowa Warrior aircraft mission equipment package. The CSMET provides initial qualification, sustainment and refresher training for OH-58D KW crews. The CSMET focuses on major functions such as Mast Mounted Sight, ATHS, Weapon Systems, Nav., and Comm., System and ASE.

AVIATOR'S NIGHT VISION INSTRUMENT SYSTEM/HEAD'S UP DISPLAY (ANVIS HUD)

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

UH-1 WIRING AIRFRAME

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

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SALE COMMUNICATION MOCK-UP

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

COMMUNICATION TOWER

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

SINGARS MARK 4

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

SINGARS MARK 5

Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
(Information not available)

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
(Information not available)

Functional Description:
(Information not available)

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

COMBAT AVIATION VIRTUAL SIMULATION (CAVSIM)

DVC 01- 193/01 CAV-T Fixed
DVC 01-193/02 MCC
DVC 01-193/03 AAR Suite
DVC 01-193/04 Driver's Station
DVC 01-193/05 A2C2S
DVC 01-193/06/01 AVTOC
DVC 01-193/06/02 TOCs
DVC 01-193/07MCAV-T
DVC 01-193/08 CFF Trainer

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The CAVSIM, located at Fort Rucker, is Army Aviation's virtual simulation collective training facility. The facility has 10 reconfigurable helicopter simulation devices and one single-seat fighter-bomber fixed-wing device which can be employed on the virtual battlefield to support collective training from platoon through battalion levels.

CAVSIM users include Aviation Center Basic and Career Courses, National Guard and Active Component units, and Aviation Task Forces training for deployments to Bosnia and Kosovo.

Functional Description:
CANSIM consists of several components functionally linked together to perform the required task. The functional components are:

01-193/01 Combat Aviation Virtual Trainer (CAV-T) - Fixed

The CAV-T is a non-motion collective trainer which can be used in a variety of rotary and fixed-wing aircraft configurations. The system has a PC simhost and image generators, and consists entirely of COTS hardware and COTS/Government software.

The CAV-T provides sufficient aircraft and battlefield functionality to support all Aviation unit METL training.

01-193/02 Mission Control Center (MCC)

The MCCs serve as control centers for Computer Generated Force (CGF) Commanders, Exercise Directors or Senior Trainers, or for Observers/Controllers. Each MCC can be configured for a specialized use as needed.

The CGF MCC is typically configured to provide control of Modular Semi-Automated Forces (ModSaf) or OneSaf which create the virtual environment, and generate red and blue forces to populate the battlefield.

01-193/03 After Action Review (AAR) Suite

The AAR suite permits Senior Trainers or Observer/Controllers to conduct multi-media After Action Reviews by employing digital tape, video tape, and radio communications replays.

The suite provides real time, slow motion, and faster-than-real time replays and viewing from a variety of three-dimensional angles and plan or map views.

01-193/04 Driver's Station

The driver's station is a non-motion generic ground vehicle station which has a PC simhost and image generators. It can accommodate a two person crew and is most frequently used as a lead vehicle in an Aviation unit Forward Area Rearm/ Refuel (FARRP) or downed aircraft recovery convoy.

01-193/05 Army Aviation Command and Control System (A2C2S) Mockup

The A2C2S device is a true scale wooden mockup of a UH-60 cargo compartment which can be outfitted with radio emulators and digital Army Tactical Command and Control System (ATCCS) devices to provide a Commander and his battle staff with a mobile C2 functionality.

The device is equipped with left and right out-the-window views and is flown by a two man crew to provide a Commander and his staff with sensations of flight and realistic battlefield mobility.

01-193/06/1 Aviation Tactical Operations Center (AVTOC)

The AVTOC room can be configured with a wide variety of analog or digital C2 systems and displays to provide an operations center for a player battle staff.

The room can also be configured to serve as an operations hub for an Exercise Control Cell.

01-193/06/2 Company Tactical Operations Centers (TOCs)

Company or Troop TOCs are equipped with digital radio emulators, and can be configured to provide space for unit map, status, and briefing boards, and for pre-mission planning.

Typical users include AC and RC units and the Aviation Captains' Career Course students.

01-193/07 Combat Aviation Virtual Trainer - Mobile (MCAV-T)

The MCAV-T is a non-motion collective trainer which is housed inside an over-the-road trailer. The system can be configured as either an OH-58D, a UH-60, or an AH-64A, and provides sufficient aircraft and battlefield functionality to support all Aviation unit METL training.

The system is readily deployable by commercial tractor to remote AC and RC training sites. When not deployed, the system can be connected to the CAVSIM facility simulation network for home station use.

01-193/08 Call-for-Fire (CFF) Trainer

The CFF Trainer is a PC based portable system which uses a stealth viewer, a Computer Generated Force station, and a projection system to generate a virtual environment in which students can be trained in Artillery call for fire procedures.

Principal users are the Aviation Center's Initial Entry Rotary Wing Course and Aviation Captains' Career Course students.

Physical Information:

None

Equipment Required, not Supplied:
None

Special Installation Requirements:
Facility Utilities

Power Requirements:
Facility Power

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

CH-47F TRANSPORTABLE FLIGHT PROFICIENCY SIMULATOR

PICTURE NOT AVAILABLE

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
(Information not available)

Purpose of Trainer:
The purpose of the CH-47F TPFS is to provide a means for on the ground training and evaluation of pilots, instructor pilots, and maintenance test pilots on the CH-47F ICH in cockpit familiarization, normal, and emergency procedures. CH-47F ICH systems and aerodynamics are modeled to provide a realistic flight environment for CH-47F ICH pilots. The "out the window" scene will be simulated for Visual Flight Rules (VFR), Instrument Flight Rules (IFR) with Instrument Meteorological Conditions (IMC), and for Night Vision Goggles (NVG) training. CH-47F TFPSs can be networked together over the telephone system to provide integrated tactical training. CH-47F TFPSs can be networked directly to other training systems and as a federate in a High Level Architecture (HLA) federation. The threat environment is simulated. The CH-47F TFPS supports training on Army XXI tasks.

The CH-47F TFPS will have the capability to be operated and maintained at the company level and to deploy with the company anywhere in the world. The CH-47F TFPS can be operated by a minimum of one pilot at either of the crew stations, and by a maximum of two pilots in the crew stations and one Instructor/Operator.

Functional Description:
The CH-47F Chinook Improved Cargo Helicopter (ICH) Transportable Flight Proficiency Simulator (TFPS), Device TBD, is a transportable, deployable training system capable of simulating all ground, takeoff, flight, operational, and landing characteristics of the CH-47F ICH. On board aircraft systems are simulated/stimulated for both normal and emergency operating procedures.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

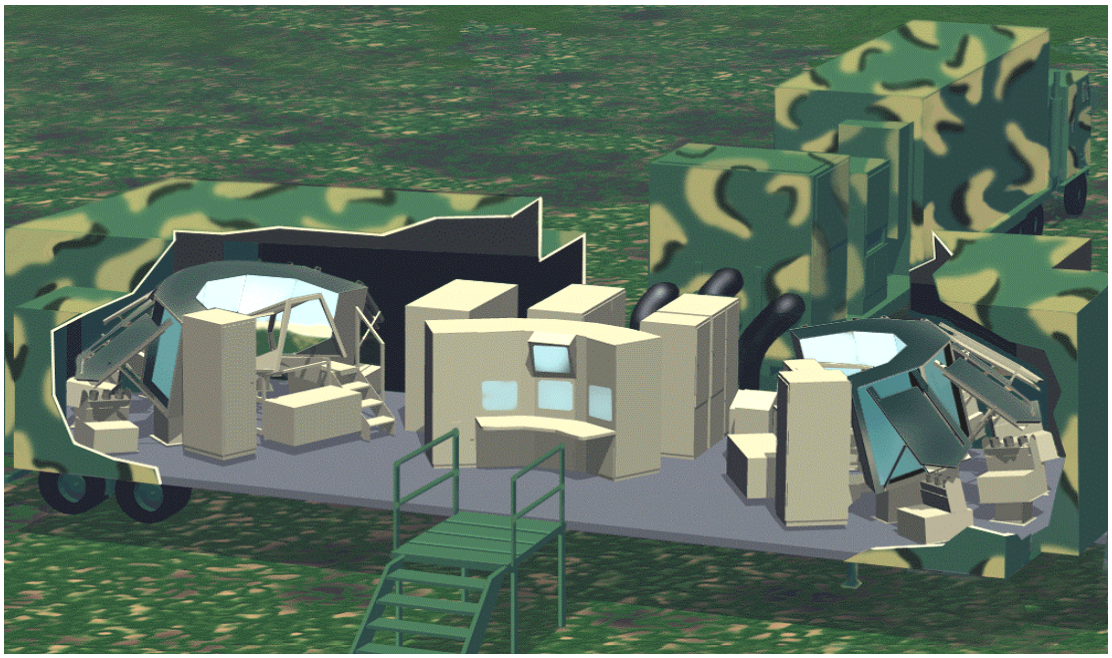
Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
TM 01-6910-719-10

Training Requirements Supported:
(Information not available)

AH64D LONGBOW CREW TRAINER (LCT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM-AAH

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Institutional and field use to support AH-64D Longbow combat skills initial, refresher, and sustainment training of unit aircrews.

Functional Description:
The AH-64D Longbow Crew Trainer (LCT) is designed to provide a training capability for flight, instruments and weapons delivery, normal and emergency procedures, and sensor system operating tasks required in the operational design of the basic helicopter. These systems include the Fire Control Radar (FCR), Pilot Night Vision Sensor (PNVS) and the gunner's Target Acquisition and Designation Sight (TADS) systems.

The simulator consists of a self-contained trailerized system, pilot and copilot/gunner cockpits, instructor module, motion seat subsystem, visual subsystem, and an integrated host computer. The pilot and copilot / gunner cockpits are replicas of the actual aircraft cockpits and each has a dynamic motion seat.

The visual system provides a current state-of-the-art out-the window scene and sensor imagery to each of the appropriate crew member video displays. Simulated imagery includes forward-looking infrared (FLIR) and day television (DTV). The training functions are controlled from the instructor operator station located in each trailerized training device.

Physical Information:

Device Trailer (59,000 LB)	W x H x L
Transport Mode	8'6" x 13'6" x 53'
Deployed Mode	18'3" x 13'6" x 53'
Service Trailer (38,000 LB)	8'6" x 13'3" x 53'
Total Deployed Surface Footprint	66' x 95'

Equipment Required, Not Supplied:
Environmental Control Unit provides for required humidification. Needs approximately 4.5 Gallons of water daily, ECS has a 5 Gal water tank

Special Installation Requirements:
None

Power Requirements:
None if use of self-contained power multifuel generator. If the unit elects not to power the LCT with the integrated generator, provisions for ground-supplied (SHORE) power

must be facilitated with the installation.

LCT Component / SHORE power requirements:
DEVICE TRAILER;
40 Kva / 103 Amps 120/208Vac 3Phase 60 Hz WYE
ECU ;
105 Kva / 291 Amps 120/208Vac 3Phase 60 Hz WYE
SERVICE SHELTER;
3 Kva / 8 Amps 120/208Vac 3Phase 60 Hz WYE

Applicable Publications:
TBP

Reference Publications:
TM 01-1520-251 Sreies

Training Requirements Supported:
1000 1004 1006 1008
1009 1010 1022 1024
1026 1032 1034 1036
1038 1040 1044 1046
1048 1052 1054 1058
1062 1064 1070 1072
1074 1082 1084 1110
1114 1116 1118 1122
1133 1134 1138 1140
1142 1143 1144 1145
1148 1151 1153 1155
1160 1170 1172 1174
1176 1178 1180 1182
1184 1188 1194 1196
1262 1416 1458 1462
1464 1469 1548 1835
2002 2004 2006 2010
2066 2130 2160 2162
2164 2180 2620 2630
2640 2650 2670 2675
2680

AH64D LONGBOW COLLECTIVE TRAINER SYSTEM (LCTS)

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM-AAH

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide team / collective training of Government selected critical tasks while deploying the AH-64D Longbow aircraft mission package. Support the training of team / company / battalion tactical tasks in a combined arms environment.

Functional Description:
The AH-64D Longbow Collective Training System (LCTS) is a multiple player station collective training device providing Unit / Staff-Level Multi-Aircraft Training System for rehearsals and crew / team interaction. The LCTS consists of at least 6 Tactical Player Stations (TPSs) with Out-the-Window (OTW) visual systems, command, staff and exercise control stations, multiple-video display, and After Action Review (AAR) capability.

The LCTS is transportable and incorporates the latest DIS protocols and interfaces for networking with other LCTs, and CATT devices.

There are a total of six trailers in the suite, two of which will provide generator and ECS, three trailers house 2 each TPSs (AH-64D cockpits) and one house's the Instructor Operator Station and AAR facility.

Physical Information:
SERVICE TRAILERS (2 each):
8.5' wide X 53' long X 13.5' high
- 2 Multi-Fuel Generators, Provides self-contained power
- 4 Environmental Control Units (ECU)
- Clean and Service Storage Area

DEVICE TRAILERS (3 each):
8.5' wide X 53' long X 13.5' high,
each expands to 14' total width deployed
- 2 TPS / Crew Stations per trailer

OPERATIONS TRAILER: (1 each)
8.5' wide X 53' long X 13.5' high expands to 14' width deployed
- IOS and AAR

Trailers (6) deployed foot print 80 x 90 feet.

Equipment Required, Not Supplied:
Multi-Fuel for generator - 11 Gal/Hr, 300 Gal Tanks
Water for Environmental Control Unit - 5 Gal/Day

Special Installation Requirements:
None

Power Requirements:
None – 2 Multi-Fuel Generators, Provides self-contained power.

Applicable Publications:
TBP

Reference Publications:
TM 01-1520-251 Series

Training Requirements Supported:
ATM Tasks
1000 1004 1008 1009 1010
1026 1032 1034 1036 1038
1040 1044 1046 1048 1052
1054 1058 1062 1116 1118
1122 1134 1138 1140 1142
1143 1145 1148 1151 1153
1155 1160 1180 1184 1188
1194 1196 1262 1416 1458
1462 1464 1548 1835 2010
2066 2130 2160 2162 2164
2180 2620 2630 2640 2650
2670 2675 2680

ARTEP mission tasks:
1-2-0001, 1-2-0101, 1-2-0103
1-2-0105, 1-2-0106, 1-2-0107
1-2-0108, 1-2-0206, 1-2-0207
1-2-0208, 1-2-0210, 1-2-0211
1-2-0301, 1-2-0401, 1-2-0402
1-2-0403, 1-2-0501, 1-2-0502
1-2-0603, 1-2-0613, 1-2-1301
1-2-2037, 1-2-2038, 1-2-2040
1-2-2041, 1-2-2042, 1-2-2043
1-2-2044, 1-2-2103, 1-2-2104
1-2-5102, 1-2-5103, 1-2-5104
1-2-5105, 1-2-6101, 1-2-6102
1-2-6103, 1-2-6104, 1-2-6106
1-2-6107, 1-2-6108, 1-2-6109
1-2-7105, 1-2-7106, 1-2-7113
1-2-7503

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